

# Aviation News

McGraw-Hill Publishing Company, Inc.

JULY 24, 1944



**Study Landing Rights in Spain:** Although his pencil points to Australia, Oswald Ryan, member of the Civil Aeronautics Board, was on his way to Madrid when the picture was taken, with Charles I. Stanton (right), Civil Aeronautics Administrator, and Fred B. Novinger (center), chief of the New York region of CAA's Air Carrier Inspection Division. They went by Pan American Clipper on a mission to study technical possibilities of landings in Spain by U. S. airlines, in line with "agreement in principle" between U. S. and Spanish governments.

## **CAB-CAA Mission in Spain; U. S.-Dutch Air Talks Open**

Conversations with Russian mission continue as diplomatic activities are speeded up on all fronts, clearing way for post-war routes.....Page 7

## **Examiners OK Northwest Extension, Milwaukee to N.Y.**

PCA recommended for Pittsburgh-New York route but Chicago-New York request disapproved; American consolidation favored.....Page 35

## **Knudsen's Ability Faces Test in ASC-Materiel Job**

Veteran trouble-shooter in office of Under Secretary Patterson will take over oft-conflicting and overlapping commands.....Page 10

## **Industry Studies Patterson Plan to Decentralize Plants**

Say proximity to coast of factories furnishing raw materials, parts and supplies, and labor, housing and climate are factors.....Page 25

## **Allied Air Blockade Eases Job of Invasion Forces**

Same tactics used in Africa, Italy and southwest Pacific are employed in isolating enemy in Cherbourg peninsula.....Page 21

## **Boeing-Wichita Seen as Personal Plane Builder**

Division, with 10,000th *Kaydet* trainer off assembly line, has running start in race for peacetime markets.....Page 16

# CHUTING BULLETS

into firing position

with strong, lightweight

## MICARTA

PORTS of Micarta extend life of both pulley and cable. Millions are now in use in Allied aircraft.

ANTHRAKITE of Micarta hold the extreme heat without yield or warble . . . withstand wide extremes of pressure and temperature.

ROCK BACKS have been successfully utilized of Micarta . . . furnish as an offize example of Micarta's strength and the skill of Westinghouse engineers in intricate molding engagements.



Bullets for a plane's chattering wing guns are stored in long, looping belts. To guide each bullet accurately into firing position, plane makers are now using sheets formed of MICARTA—"444", the light, strong sheet plastic. Here's why:

MICARTA weighs approximately one-half as much as aluminum of equal strength—helps eliminate superfluous weight in the plane.

MICARTA rates high in flexural, compressive and impact strength. In high altitude flying, as temperatures decrease, Micarta acquires added tensile strength.

MICARTA "444" is easily and quickly produced with inexpensive wooden molds. Sheets are subjected to heat and pressure, and formed into strong, intricate shapes. This new Micarta "666" was originally developed for the aircraft industry and is now accepted for use as trim tab fairing, accumulator covers, aileron's chord cases, fuselage tailwheel housing, wing-gun ejection chutes. For further information, and a copy of the New Micarta Data book (D-1214 A) write Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., Dept. J.N.

24000

THE AVIATION NEWS

## Washington Observer

**PRESS SUPPORTS CHAMBER**—A virtually unprecedented editorial support is being given the Aeronautical Chamber of Commerce's Air Power statement and its resolution by Undersecretary of War Patterson and Assistant Secretary of the Navy Gates in testimony before a Congressional committee. The Air Power declaration has been sent to virtually every medium of public information and is being used both in credited and uncredited substantiation of the overall program. It emphasizes the absolute necessity for a strong aviation voice in Washington.

\*\*\*

**MOORE ACTION NEAR**—Although the European Atlantic front has been relatively bogged down for some time, look for it to burst into renewed flame and fury before long. The Mustang and the Mustang concept, the wing war do not permit static situations. When they develop, as they have in Normandy, some means is devised to break it radically and quickly. It may come as soon as the weather breaks enough for air power to be used to full extent.

\*\*\*

**DETROIT LOOKS AHEAD**—Aircraft industry is interested to recent announcement that Packard is establishing a separate division at its Toledo plant to "handle advanced aircraft engine development at the specific request of the AAF." That means substantial and continuing post-war aviation activity. General Motors is also known to have plans somewhere in the underdevelopment for its new two-cycle, four-cylinder liquid-cooled engine described in the News July 5. Ford has no intention of deserting aircraft when the war ends. These are reasons why public statements from Detroit as much of interest in aviation are not readily accepted by airline aircraft firms.

\*\*\*

**MISGIVINGS ABOUT PAC**—Far from being merely a nuisance, the robot bombs (de-

scribed by returning visitors as PAC, or million switch) starting Berlin are as important weapons. Washington brass hats are beginning to be embarrassed because of our failure to develop and exploit robots. It is true that they may not change the course of the war. But their ease and economy of manufacture in proportion to the damage they cause, and their application for the future, make it difficult for top Army officials to answer questions. The U. S. has been using radio-controlled planes of various sizes for years, mainly as moving targets for gunfire practice, but these are not in the robot bomb class. One high government official in a press conference last week embarrassed military men present. "Why is it that we left it to the Nazis to spring this weapon on us?" He had just returned from England. The question is gaining currency.

\*\*\*

**JAPS SLOW RECOVERY**—Bombing of Japan will have much more serious consequences than generally believed, Washington officials believe. The answer does not lie in "wooden" cities, but in lack of fire reconstruction equipment. In Germany and England, good firefighting and construction equipment sustained damage, enabled speedy rebuilding. In addition are that this will not be true of Japan. Parallel may be drawn from airfield construction equipment. Navy has found that Jap airfields have been built and repaired the laborious way throughout the South Pacific, whereas the United States has moved in with highly-specialized, well-equipped Seabees and finished the job in one-tenth the time the Japs required. Such a handicap amounts to geometric proportion under bombing of industrial facilities.

\*\*\*

**THE SIBERIAN THREATENS**—Mainly because technological progress in the synthetic manufacturing phase is beginning to outstrip manpower, supply of all types of tires is tightening rapidly. High Army officials, including Gen. Knabner, have warned around Alaska to study



Lockheed Lodestar takes off with two Waco gliders

Westinghouse  
**Micarta**

THE AVIATION PLASTIC



## *Harnessing* THE HORSES OF WAR.

The pressure of war has packed the power of thousands of horses into a few cubic feet of metal. And the harnessing of that power to the great bombers that daily are roaring to victory over Berlin and Truk requires master engineering and precision manufacture. The **MOTOR MOUNTS** for some of America's newest and largest bombers are being produced in the completely modern plants of the Gusherson Corporation. Care and precision in manufacture are the hallmark of every Gusherson built aircraft part.

*Guiberson* **PRECISION BUILT**

- Gaps between panels at all joints
- Sheet metal expansion
- Flap latch supports
- Pin welds
- Accessibility work
- Nonrigid joints
- Static mounts
- Joints
  - Creating joints and expansion
  - Exhaust assemblies
  - Intake assemblies
  - Gas welders at Asbestos
  - Gas cylinder bottles
  - Gas meter levers
  - Casework windows
  - Seals
  - Burns
  - High Altitude heating systems
  - Operating tools
  - Pipeline assembly
  - Caffeine use



## AVIATION NEWS

July 26, 1944

## CONTENTS

	PAGE
Williamson Charters	11
Hudson River Section	11
Forest Planting	11
Air War	11
Barrage	11
Asphalt Production	11
Financial	11
Taxonomy	11

## THE PHOTOS

Carnegie-Wright Corp.	
Clark Industries, Montreal	18
Florida Industrial Co.	
U. S. Navy	
Imperial Chemical Industries	
U. S. Army Air Force	
Acme Newspapers, Inc.	
Self-Heating by Water	
Deagler Aircraft Co.	
Self-Heating by Air	

## THE STAFF

GEORGE W. FINE	Publicity
HERBERT H. WOOD	Editor
C. SCOTT HERRICK	Managing Editor
JACQUES BUTLER	City Editor
MIRIAM H. MICKEL	Transport Editor
DANIEL S. WINTER	Tourism
MARY PAULINE PERRY	Far Afield
WILLIAM C. KIN	Special Assignments
HAROLD STEINBERG	Special Assignments
MAXIM V. MURPHY	New York Editor
SCHLIESE BUNDS	French Coast Editor
ALFRED MCGOWAN	Mid East Editor
DANIEL MALLARD	An America
ANDREW B. MARTIN	Solo Member

### Editorial Headquarters

1337-63 National Press Building,  
Washington 4, D. C.  
Publication and Executive Offices,  
330 W. 42nd St., N. Y. 36, N. Y.

1985  
 1986  
 1987  
 1988  
 1989  
 1990  
 1991  
 1992  
 1993  
 1994  
 1995  
 1996  
 1997  
 1998  
 1999  
 2000  
 2001  
 2002  
 2003  
 2004  
 2005  
 2006  
 2007  
 2008  
 2009  
 2010  
 2011  
 2012  
 2013  
 2014  
 2015  
 2016  
 2017  
 2018  
 2019  
 2020  
 2021  
 2022  
 2023  
 2024  
 2025  
 2026  
 2027  
 2028  
 2029  
 2030  
 2031  
 2032  
 2033  
 2034  
 2035  
 2036  
 2037  
 2038  
 2039  
 2040  
 2041  
 2042  
 2043  
 2044  
 2045  
 2046  
 2047  
 2048  
 2049  
 2050  
 2051  
 2052  
 2053  
 2054  
 2055  
 2056  
 2057  
 2058  
 2059  
 2060  
 2061  
 2062  
 2063  
 2064  
 2065  
 2066  
 2067  
 2068  
 2069  
 2070  
 2071  
 2072  
 2073  
 2074  
 2075  
 2076  
 2077  
 2078  
 2079  
 2080  
 2081  
 2082  
 2083  
 2084  
 2085  
 2086  
 2087  
 2088  
 2089  
 2090  
 2091  
 2092  
 2093  
 2094  
 2095  
 2096  
 2097  
 2098  
 2099  
 2100  
 2101  
 2102  
 2103  
 2104  
 2105  
 2106  
 2107  
 2108  
 2109  
 2110  
 2111  
 2112  
 2113  
 2114  
 2115  
 2116  
 2117  
 2118  
 2119  
 2120  
 2121  
 2122  
 2123  
 2124  
 2125  
 2126  
 2127  
 2128  
 2129  
 2130  
 2131  
 2132  
 2133  
 2134  
 2135  
 2136  
 2137  
 2138  
 2139  
 2140  
 2141  
 2142  
 2143  
 2144  
 2145  
 2146  
 2147  
 2148  
 2149  
 2150  
 2151  
 2152  
 2153  
 2154  
 2155  
 2156  
 2157  
 2158  
 2159  
 2160  
 2161  
 2162  
 2163  
 2164  
 2165  
 2166  
 2167  
 2168  
 2169  
 2170  
 2171  
 2172  
 2173  
 2174  
 2175  
 2176  
 2177  
 2178  
 2179  
 2180  
 2181  
 2182  
 2183  
 2184  
 2185  
 2186  
 2187  
 2188  
 2189  
 2190  
 2191  
 2192  
 2193  
 2194  
 2195  
 2196  
 2197  
 2198  
 2199  
 2200  
 2201  
 2202  
 2203  
 2204  
 2205  
 2206  
 2207  
 2208  
 2209  
 2210  
 2211  
 2212  
 2213  
 2214  
 2215  
 2216  
 2217  
 2218  
 2219  
 2220  
 2221  
 2222  
 2223  
 2224  
 2225  
 2226  
 2227  
 2228  
 2229  
 2230  
 2231  
 2232  
 2233  
 2234  
 2235  
 2236  
 2237  
 2238  
 2239  
 2240  
 2241  
 2242  
 2243  
 2244  
 2245  
 2246  
 2247  
 2248  
 2249  
 2250  
 2251  
 2252  
 2253  
 2254  
 2255  
 2256  
 2257  
 2258  
 2259  
 2260  
 2261  
 2262  
 2263  
 2264  
 2265  
 2266  
 2267  
 2268  
 2269  
 2270  
 2271  
 2272  
 2273  
 2274  
 2275  
 2276  
 2277  
 2278  
 2279  
 2280  
 2281  
 2282  
 2283  
 2284  
 2285  
 2286  
 2287  
 2288  
 2289  
 2290  
 2291  
 2292  
 2293  
 2294  
 2295  
 2296  
 2297  
 2298  
 2299  
 2300  
 2301  
 2302  
 2303  
 2304  
 2305  
 2306  
 2307  
 2308  
 2309  
 2310  
 2311  
 2312  
 2313  
 2314  
 2315  
 2316  
 2317  
 2318  
 2319  
 2320  
 2321  
 2322  
 2323  
 2324  
 2325  
 2326  
 2327  
 2328  
 2329  
 2330  
 2331  
 2332  
 2333  
 2334  
 2335  
 2336  
 2337  
 2338  
 2339  
 2340  
 2341  
 2342  
 2343  
 2344  
 2345  
 2346  
 2347  
 2348  
 2349  
 2350  
 2351  
 2352  
 2353  
 2354  
 2355  
 2356  
 2357  
 2358  
 2359  
 2360  
 2361  
 2362  
 2363  
 2364  
 2365  
 2366  
 2367  
 2368  
 2369  
 2370  
 2371  
 2372  
 2373  
 2374  
 2375  
 2376  
 2377  
 2378  
 2379  
 2380  
 2381  
 2382  
 2383  
 2384  
 2385  
 2386  
 2387  
 2388  
 2389  
 2390  
 2391  
 2392  
 2393  
 2394  
 2395  
 2396  
 2397  
 2398  
 2399  
 2400  
 2401  
 2402  
 2403  
 2404  
 2405  
 2406  
 2407  
 2408  
 2409  
 2410  
 2411  
 2412  
 2413  
 2414  
 2415  
 2416  
 2417  
 2418  
 2419  
 2420  
 2421  
 2422  
 2423  
 2424  
 2425  
 2426  
 2427  
 2428  
 2429  
 2430  
 2431  
 2432  
 2433  
 2434  
 2435  
 2436  
 2437  
 2438  
 2439

[illegible]

## Advertisers Index

[illegible]

the problem and seek to encourage higher productivity per worker. War Department is understood to have approved release from the Army of all qualified former rubber workers over 35. Aircraft and army truck tire schedules will be met, but probably at the expense of auto tires for civilians.

**PORT PROGRAMS TOO SPECIFIC**—Several leading aviation groups and agencies have agreed not to go on record specifying the minimum number of new facilities which should be built. Figures have varied so widely, depending upon the particular agency or individual making the statement, that there appeared a glaring lack of unanimity among those who should know most about the subject.

**PCA-NWA DECISION EXPECTED**—Washington observers are betting heavy odds that the examiners' report recommending extension of Northwest Airlines from Milwaukee to New York and PCA's Pittsburgh-New York route will be backed up by a CAB decision.

**POST-WAR AIR FORCE**—High War Department officials, in making confidential recommendations as to the size of the post-war air force, are preparing varying programs ranging from a big fleet in the case of little international cooperation, down to an air force very much smaller than our present set-up if the world submits to a high degree of international cooperation.

**PLANES FOR AUSTRALIA**—After a long struggle, Australia is about to abandon hope of obtaining Desudars transports from U.S. factories. She was turned down by top military officials here recently. All of her transports are at least seven years old and are badly worn by heavy war duty. Officials now hope to obtain some abandoned U.S. army transports from the Southwest Pacific theater and convert them to commercial types, although this may cost as much as \$40,000 additional per plane. U.S. manufacturers, however, don't favor this idea, even though the Australians claim they will still want new craft from us after the war.

**CUTBACKS INEVITABLE**—Aircraft schedules for the remainder of 1944 and through 1945 are being decreased in some categories. Transports will be unaffected probably. Bombers and fighters will be cut somewhat. Meanwhile, output in the first ten days was below program to the point where high WFR officials

Washington Observer

were asking questions of the industry. Plants behind reported few dangerous retarding elements. Subcontractors' difficulties, irregular deliveries of assemblies, the usual unpredictable problems. Most firms are confident they can meet the July schedule.

**WASP DEMISE**—Although the War Department's announcement indicates WASP activities will continue "for the present" it is only a matter of months until the entire program will be washed out. The recent House vote against taking the WASPs into the Army and increasing the program was the first major defeat the Army Air Forces has met in Congress since the beginning of the war.

**BRITISH AAF EXCEEDS RAF**—Officials returning from England report that the United States, in its 8th and 9th air forces, now is operating more aircraft and on more and heavier missions, than the famous Royal Air Force can master. The 8th and 9th represent the world's most powerful air force, yet these two components are only a part of our global fighting network.

**NO COMPLAINTS**—War Department officers visiting AAF bases in England hear few complaints about our aircraft! It is a far cry from the widely broadcast squawks of a year or two ago, during debates over whether our fighters and bombers were inferior to those of Great Britain. Now our investigators are actually being advised by fighting pilots, "Leave the ships alone. Don't change 'em." The P-51 came in for special praise last week from Assistant Secretary of War Lovett, at his first press conference since returning from England. "It's a homer," he said.

**WEST COAST FLYING**—By the time this is printed the 4th Air Force may have moved from San Francisco headquarters long-awaited orders easing wartime civilian flying restrictions on the Pacific coast. Owners of civilian flying schools, their military training programs now canceled, should not anticipate any relaxation of military orders prohibiting civilian flight training within the western combat zone, however. This restriction may remain in effect for the duration. Should the new orders follow an anticipated easing of military orders, it will extend beyond the war zone to the authorized limits of privately owned and company-owned planes in connection with war effort business trips, and the ferrying into the combat zone of private aircraft for repairs in west coast shops.



**M**OST versatile of all non-military aircraft in the U. S. armed services, the Model 18 Beechcraft twin-engine all-metal monoplane has been produced for the U. S. and allied governments in five distinct special-purpose types, ranging from high altitude photographic to bombing and navigation trainers, and combined personnel and utility transports. Fifteen variations of these types have been built for specialized uses.

The Army Air Forces AT-7 Beechcraft navigation trainer, for example, has been produced in large quantities as a landplane, and has also been factory-built as a seaplane or skiplane, using streamlined Edo floats or Noorduyn skis. Quickly convertible from a landplane to a seaplane or skiplane, this

type has fulfilled exacting special duties in Alaska and the far North, and elsewhere. Precedents for these uses were established years before the war, when the commercial Model 18 Beechcraft won great favor with Canadian airlines and other users who required fast, all-season transportation above the trackless bush country to mining and for trading outposts sometimes well north of the Arctic circle. Landings were made on tree-fringed lakes, and on the open waters of Hudson's Bay and the Arctic Ocean. Its commercial users were exacting in their requirements, its military users are even more exacting. Beechcrafts are doing their part, in war as in peace, in all parts of the world, in every climate, and under all conceivable conditions of flight.

# Beech Aircraft



CORPORATION

BEECHCRAFTS ARE DOING THEIR PART

WICHITA, KANSAS 672 01

## CAB-CAA Mission Lands in Spain; U. S.-Netherlands Air Talks Open

Conversations with Russian mission continue as diplomatic activities are speeded up on all fronts with view to clearing way for establishment of America's post-war routes.

The State Department's intention to place American air transport in the forefront of post-war international flying is marked today by accelerating diplomatic activity in direct relation to the progress of the war in Europe.

Specific developments last week were the opening of talks with Netherlands diplomats and an expert and the arrival in Spain of a CAB-CAA mission to get meat on the skeleton "agreement in principle" which the Department confirmed had been reached.

**Neds Continue Mission**—Russian aviation officials at the same time confirmed their mission in Washington, having sandwiched in several inspections of American commercial aviation facilities.

Qualified sources made it clear that the time has arrived to lay out our overseas air picture and to guarantee it through a series of bilateral agreements. They said the progress of the war is peeling this veil recently.

**Roads Battle Grown** appeared, moreover, that the battle for post-war air routes was on at its earnest. At the time of the disclosure of the American-Spanish agreement, both American and British sources here said Britain either had obtained or soon would obtain landing rights in Spain under conditions similar to those granted America.

In this connection it is of interest that Britain and the United States at the outset of the war reached an "understanding" whereby neither is to seek an exclusive commercial agreement anywhere while the war is in progress.

There was no disposition here to regard the Spanish deal as a windfall to France. It was believed to have roots in the negotiations dur-

ing the Winter and Spring which issued in an Allied triumph over Nazi diplomacy. Although details of the air agreement with Spain are not public, it is unlikely that they would give Germany satisfaction.

**First U. S. Foothold in Europe**—In Spain, American sources here first foreshadow in Europe under the apparent system of intergovernmental negotiation which will be used from now on. It would appear likely that Portugal sooner or later will be approached in the same vein. Her control with Pan American bears a stipulation that either the U. S. or Portuguese government may, in effect, supersede it by opening negotiations on landing rights.

The Army and Navy probably are pleased with the commercial aviation moves by the State Department. It is a good guess that the ATC will prefer to move out of Europe under air transport agreements, as soon

### Air Attaches

A State Department source disclosed last week that plans have been made to place commercial air attaches in United States Embassies at Rio de Janeiro, London, and Ottawa, to advise the U. S. Ambassador or Minister on matters relating to commercial aviation. Others may follow.

as Germany surrenders unconditionally. In that event, commercial aviation must be prepared to move in.

**Dutch Position**—The Netherlands position has not been set forth as yet, but Americans are pressing the Dutch to be one of the leading contenders for air routes.

Royal Dutch Airlines, among the few foreign operations permitted to land in this country, long has been one of the world's most efficient lines.

The Dutch, as a colonial power, naturally will be quick to capitalize on the necessity to tie their interests together with air routes where test power once suffered.

Members of the Netherlands delegation are Minister B. Kieps Meliswarp of the Embassy, M. P. L. Steenbergh, delegation chairman, Frederick C. Aronstein and Capes Van Housh.



### CARAVANS AROUSE CURIOSITY:

Although the large contract for C-28 Caravan Caravans was canceled last year, 23 of the ships, built of plywood and other non-strategic materials, were completed and are in regular operation throughout the country on Arroyo cargo flights. Because of the small nature, the planes are not well known and arouse curiosity wherever they are seen. (Previous photos in AVIATION NEWS, Feb. 7.)

## Aviation Welcomes Hinkley Assignment

Sperry vice president and former CAA chairman selected to direct new and vital Office of Contract Termination.

The aircraft industry generally welcomed the announcement that Robert H. Hinkley, vice-president of Sperry Corp., former chairman of the Civil Aeronautics Authority and later Assistant Secretary of Commerce for Air, had been nominated by the president as director of the Office of Contract Termination.

From his post as vice president of an organization that has made a vital contribution to the war effort, Mr. Hinkley steps into an office that will direct and coordinate the liquidation of the war production and its conversion to peace. Ability of the Director of Contract Termination to accomplish this task quickly and efficiently will have an important influence on the industrial future of America.

**Worked with FRA.**—Mr. Hinkley, formerly a successful businessman in Salt Lake City, first came to Washington with the old Federal Reserve Administration, becoming head of the Civil Aeronautics Authority while that organization was an independent agency and Assistant Secretary of Commerce for Air in the reorganization of 1940.

It is given major credit for the Civilian Pilot Training program, one of the few measures considered in advance of the war to become a major factor in the successful conduct of the war.

**Joined Sperry Corp.**—In 1942 he returned from the Commerce post to join Sperry Corp. at a time when that company was engaged in one of the most vital of all the war expansion programs.

He was recommended for his new position by John M. Harwood, who is now assistant secretary of the Contract Termination Board in the office of Director of War Mobilization James B. Hyman. The legislation creating the office Mr. Hinkley will hold is a vital part of the Harwood-Hyman program for demobilization and is a key-stone of their recommendations. Many of its features were incorporated into the latter portion of Comptroller General Lindsay Warren because of its emphasis on speedy conversion of the nation's industrial economy from war production to post-war production for full employment.



Robert H. Hinkley

### ► Air Industry Important Phase—

One of the most important phases of the demobilization and conversion problem will be that of the aircraft industry and the appointment of Mr. Hinkley, familiar as he is with the problems of the industry that is now the largest in the nation, indicates the importance that its orderly demobilization holds in the eyes of the nation's leaders.

His interest in aviation dates from 1928, when he became president of the Utah Pacific Airways. He no longer holds any interest in this company. His earliest public service in 1916 as a member of the Utah State House of Representatives, was Mayor of Miami Beach, Utah, 1924-25. In 1933 he became Emergency Relief Director for Utah. He later directed for seven years the Federal Bureau of Investigation, was Secretary of the Federal Reserve Bank of St. Louis, and assistant administrator of FRRA, and assistant administrator of WPA in charge of eleven western States.

**Launched.**—Born at Fillmore, Utah, in 1891, Mr. Hinkley was graduated from Brigham Young University in 1918, after three years of residence and travel in Europe. He has been an instructor in languages which required his retirement in state-wide automobile sales business. He is married, and has three sons and a daughter. His oldest son is a cadet at West Point.

**Launched.**—Born at Fillmore, Utah, in 1891, Mr. Hinkley was graduated from Brigham Young University in 1918, after three years of residence and travel in Europe. He has been an instructor in languages which required his retirement in state-wide automobile sales business. He is married, and has three sons and a daughter. His oldest son is a cadet at West Point.

**Launched.**—Born at Fillmore, Utah, in 1891, Mr. Hinkley was graduated from Brigham Young University in 1918, after three years of residence and travel in Europe. He has been an instructor in languages which required his retirement in state-wide automobile sales business. He is married, and has three sons and a daughter. His oldest son is a cadet at West Point.

## James V. Griffin Dies

Death of James V. Griffin, first public relations director of the reorganization Lockheed Aircraft Corp. in 1934, culminated a lengthy illness which required his retirement on leave of absence in 1935. Griffin had recovered sufficiently a year ago to assist in the company's public relations program.

## Decision Near on Gas Ration Transfer

Move for shifting jurisdiction on 73 and 80 octane fuel from GPC to CAA expected this week.

A decision on the proposal to transfer refueling of 73 and 80 octane gasoline from the Office of Price Administration to the Civil Aeronautics Administration is expected this week. Action was awaiting return of WPA Chairman Donald Nelson to his office following illness.

The Petroleum Administration for War has advised Mr. Nelson's office that, so long as consumption of this type of fuel does not increase, it does not care whether rationing is in the hands of GPC or CAA. Observers say Nelson's need for overall cooperation of GPC might make him hesitate to degree it of authority over aviation precedent for special treatment for military grades. But as one felt capable of predicting what the chairman of the WPA will do.

The National Aeronautics Association expressed the opinion that rationing of this gasoline will be tougher if it is handled by GPC than if it is done by CAA, since CAA fuel will be refined to be more sympathetic. NAA officials said there are about 1,100 gallons in the country dispensing 73-80 fuel. GPC probably would make its first allocation to them on the basis of requests from the dispensers. The second, and continuing, allocations would be based on required reports from dispensers, making it general who purchases the fuel and for what purposes.

**CAA Procedure.**—If CAA is put in charge, pump operators will be given detailed instructions as to what classes of non-aviation flyers are entitled to gasoline, and for what purposes, together with the fuel consumption rates of various aircraft types.

At present 73-80 gasoline is rationed by local boards under CAA, but it is not subject to restriction on the amount of consumption applicants may receive.

National Aviation Trades Association warned all operators against "the effects of abuse of the gasoline privileges which they now have." It said operators are advertising pleasure flights and other types of flying that can have no necessary or essential aspect, NATA stated.

## Hawthorne Expands Fixed Base Plans

Two new operations part of post-war program in Southeast.

A four-point program based on expansion of fixed base operations on air-mail pick-up route, establishment of a major overhaul base, and development of aircraft parts sales and distribution from the basis of post-war activities suggested by Beverly Howard, president of Hawthorne flight operations, whose headquarters are at Orangeburg, S. C., where Hawthorne operates a large Army Air Forces contract pilot school.

Program is at least one of these phases is already well under way with recent establishment of two new fixed base operations in North Carolina.

Adjusting with Air Services, Inc., the only special carrier authorized by CAA to operate satisfactorily and charter service from Washington National Airport, was accomplished with purchase of an airplane that originated.

**Two Bases Opened.**—Hawthorne's two North Carolina bases, opened this Spring, are at Rocky Mount and Greensboro-Elgin Point, where the respective cities have granted charters to Hawthorne to operate general aeronautical services. Five or six airplanes have been assigned to each of these bases and a brief flying instruction and charter business has been developed.

These new establishments at Columbus, S. C., where for six years Hawthorne Flying Service has operated Owens Municipal Airport and given training to hundreds of World aviation cadets on the T-3 program in conjunction with the University of South Carolina, and at Orangeburg, where Hawthorne Airservice conducts a general flying operation separate from the Army contract at the Hawthorne Field in the same city.

**Charlotte Unit to Be Used.**—Hawthorne also will reopen its original base established in 1932 at Charlotte, S. C., municipal airport upon completion of the war emergency, which forced cessation of activities several years ago.

In addition to these definite steps already taken, negotiations are under way with a number of other cities in the Southeast for the far operating rights on their municipal airports. The broad expansion program visualizes a tripling of the present number of Hawthorne fixed bases.



### NEW PHOTOGRAPHIC SPITFIRE.

First photo released of the all-metal Spitfire XI, long-range photo reconnaissance plane, with Rolls-Royce Merlin engine of more than 1,600 hp and Rotol four-blade constant speed propeller. Later versions have hydraulically retractable tail wheel. Two main fuel tanks are in the fuselage and long-range tanks are in the wings. Converter are in the bottom of the fuselage. Span is 36 ft. 10 in., length is 21 ft. 2 in., and weight is 11 ft. 4 in. Described by RAF Coastal Reconnaissance Unit as fastest of its type in the world, it is also flown by USAAF photo pilots.



**Subs. Program.**—An aggressive sales program, to represent every type of airplane from light ships to large twin-engine personal transport, will be coordinated with these fixed bases.

Hawthorne Airways has filed applications with CAA for five pick-up routes serving 167 communities in the Carolina and Virginia with the hub of operations centered at Greensboro-Elgin Point. The services provided by the same type, provided by All American Aviation, Inc.

Air Services, Inc., in Washington is non-operative at present, but will resume activity as soon as civil

ian flight restrictions in the capital area are lifted.

**Overhaul Base.**—To serve not only the maintenance requirements of Hawthorne equipment but also the needs of the general flying public, a master overhaul base, capable of caring for the smallest aircraft up to large multi-engine equipment, is projected for some strategic point in the east, and personnel and plans for such an establishment already have been organized.

Hawthorne's military training at Orangeburg is continuing at present with full quotas of cadets and more planes than previously used.

## Knudsen's Ability to Slash Red Tape Faces Test in ASC-Material Job

Vietnam trouble shooter in office of Under Secretary Patterson will take over oft-conflicting and overlapping commands and seek to coordinate vital work of both.

The aviation industry will watch closely the new administrative reorganization of the Air Service Command and the Materiel Command to determine whether Lieut. Gen. William R. Knudsen, director of the new AAF Materiel and Services, can slash the red tape and organizational complexities that have slowed down many projects. He has been given ample authority, it was said authoritatively.

Gen. Knudsen produced trouble-shooter in the office of Under Secretary of War Patterson for three years, will take over two commands whose work has frequently been interlocking and severe of much friction. Bringing them back into a single organization, it is hoped, will bring about smoother functioning of cooperative projects. At any rate, Gen. Knudsen is regarded as the best man in the Army to do a red-tape slashing job and coordinate the vital work being done by the two commands.

**Remains Separate**—They will remain separate under Gen. Knudsen's overall command, with Maj. Gen. Delmar H. Dutton as commander of the ASC and Brig. Gen. Kenneth B. Wall as commander of the Materiel Command. Maj. Gen. Bennett E. Meyers, who has been head of the Materiel Command, becomes deputy director under Gen. Knudsen.

Before Mar. 13, 1941, ASC was the field service section of the Materiel Division, and had continued in that status for many years, with a relatively small peacetime complement of aircraft repair maintenance and supply for the Army's planes. With realization of the tremendous problem of maintenance and supply created by our growing air force, a provisional maintenance command was set up, still under Materiel Division, and headed by the then Col. Henry J. F. Miller.

**Two Commands Set Up**—A further reorganization Oct. 17, 1941, established the two commands as equal entities. After laying ground work for the separate organization, Miller, who eventually

became a major general, swapped jobs with Maj. Gen. Walter H. Frank, who had organized a counterpart of the ASC in Europe.

From Frank's arrival in November 1942, at Dayton, the newly organized organization with many untrained workers began a rapid transformation. General Frank is known in the AAF as a "red tape" driving, vicious engineer. He is unquestionably the man speaking which has turned ASC into a working organization.

**Depicted on Business**—Frank organized ASC as a business, with operating divisions and an overall control, pointing out that the organization handled over 240,000 items and was, in fact, much larger than any single private American business enterprise.

Under the divided setup, the Materiel Command, which was headed successively by Gen. George C. Kenney, Arthur W. Yonatan, Charles E. Brinkheiser, and the new deputy director of the Materiel Command, Bennett E. Meyers, has been charged with research and development and purchase of AAF equipment, supplies, and services. The new deputy director, actually every aspect required by the planes and the men who flew them.

**Overlapping**—It is obvious that there is an overlapping of function between the two commands, which

## AVIATION CALENDAR

**Jan. 10-11**—Joint Airport Users Conference, National Aeronautics Association, Washington.

**Jan. 11**—General Information Council Meeting, Aeronautical Research Society, Dallas. The Joint Meeting of the American Aeronautical Society, American Society of Mechanical Engineers, and the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., will be held at the same time.

**Jan. 12-13**—General Information Council Meeting, Aeronautical Research Society, Dallas.

**Jan. 14-15**—General Information Council Meeting, Aeronautical Research Society, Dallas.

**Jan. 16-17**—General Information Council Meeting, Aeronautical Research Society, Dallas.

**Jan. 18-19**—General Information Council Meeting, Aeronautical Research Society, Dallas.

**Jan. 20-21**—General Information Council Meeting, Aeronautical Research Society, Dallas.

**Jan. 22-23**—General Information Council Meeting, Aeronautical Research Society, Dallas.

**Jan. 24-25**—General Information Council Meeting, Aeronautical Research Society, Dallas.

**Jan. 26-27**—General Information Council Meeting, Aeronautical Research Society, Dallas.

**Jan. 28-29**—General Information Council Meeting, Aeronautical Research Society, Dallas.

**Jan. 30-31**—General Information Council Meeting, Aeronautical Research Society, Dallas.

has been handled by coordinators on projects, but which has nevertheless resulted in considerable duplication of effort.

For example, under the divided command setup, ASC had no business equipment, no maintenance tools or equipment. If an ASC worker had an idea, he had to coordinate it with the proper Wright Field laboratory. Materiel Command, possessing the information from which technical orders are issued, but Air Service Command's technical data section printed and distributed the order. Every minute expenditure on an airplane or piece of equipment was coordinated with the Materiel Command. Communications between the two organizations to bring about the technical order for the change, and to follow through and see that it was done. The manufacturers are many.

Dutton said that while Frank did a good job under the existing ASC setup. Whether the reunion of the two commands will cut the red tape, which has slowed down many projects, remains to be seen.

## Contract Tapering

Major aircraft manufacturers are reported to be negotiating a taper-off clause in their contracts for new contracts for war orders, which would permit them to continue production for a considerable period in order to protect them and the thousands of aircraft workers from any unexpected termination.

The main problem of most aircraft manufacturers is that they could not continue to receive payments for more than a week, or at best a few weeks, in the event of sudden cancellation of contracts.

## Airworthiness Talks

Conditions which should govern the admission of foreign aircraft to the country for sale to private purchasers and regulatory requirements which should be placed on equipment of foreign airlines operating into this country will be the subject of early discussions by the American Bureau of Aeronautics, Committee of the Aeronautical Chamber of Commerce.

The meetings, called for Aug. 1 and 2, will be held at the Hollywood Knickerbocker Hotel in Hollywood, Calif., by Joseph D. W. Vinton, and at the Lexington Hotel, in New York City, for the Eastern Division.

## WEST COAST REPORT

### Study Tax Exemption Plan for Airlines

California legislation continues expected to draft proposal to ease burdens of air transport taxes till they have become more firmly established.

By SCHOLER BANGS

California's State Legislature Interim Committee on Aviation seems to be reported to be considering a proposal in the Legislature that aircraft operators be exempted from gasoline and property taxes until their post-war business has become "firmly established." Anticipated railroad opposition will be countered by retention of tax and land grant concessions given the railroads in their infancy.

Chairman William H. Rosenthal (Assemblyman) also expects to propose the creation of a California Aviation Committee of state members to guide the state's aviation policies. The proposal will recommend that appointments be made by the governor from lists of candidates submitted by aircraft manufacturers, airlines, airport operators, and aviation fire organizations.

**"Control" Legislation**—The committee is expected to approve any state aviation "control" legislation beyond that which might give support in Federal air commerce regulations.

Offering a gradual approach to regulatory legislation that is inevitable, the Rosenthal proposal will promise that regulatory support as substantial as the opposite airlines probably will give is a California Railroad Commission bill that is expected to go to the Legislature in January.

California aviation leaders feel that the Railroad Commission's proposal of air commerce legislation that would give the Commission air transport control jurisdiction prevents the danger of serious carrier influence upon a political commission which has had no previous interest in fostering the development of air transport enterprises.

**Air Cargo Questionnaire**—A test of the maturity of the Railroad Commission, and one which may determine the extent to which the aviation industry of the West Coast grows out of its later legislation proposals, will be a state-wide air cargo survey questionnaire, which



ASSEMBLING 40-FOOT PROPELLER FOR NACA TUNNEL:

The photo of a workshop putting together one of the 12-bladed, 40-foot diameter propellers for the NACA wind tunnel at the \$7,600,000 Ames Aeronautical Laboratory at Moffett Field gives some idea of the size of the huge chamber, which measures 94 by 123 feet at the point where the six water-driven propeller units are located. The tunnel is made enough to test models of 80-foot wingspread.

should be in distribution this week to industries, agricultural groups, business firms and heads of municipal and county governments.

**PLANE CONVERSIONS**—West Coast conversion of Air Transport Command planes retained to airlines may result in the demands of some airlines for a review of repurchase contracts and a scaling down of prices. Airlines are expected to be discovering in the returned aircraft damage that will be conversion costs far above government allowances before the airplanes can be certified as airworthy.

## West Coast Hearings

Recessiveness hearings similar to those recently held by the War Contracts Subcommittee of the Senate Military Affairs Committee in Washington, will be conducted late this month and early in August on the West Coast. Senator Murray (D., Mont.) will conduct the hearings.

Both aircraft and shipbuilding executives and labor leaders will be heard in the open sessions, starting July 16 in Seattle. Others will be held in Portland, July 28 and 30; San Francisco, Aug. 1 and 3; Los Angeles, Aug. 2 and 3; and San Diego, Aug. 4. It is expected that Henry Kaiser will appear at the San Francisco hearings.

## Pilot Output Rate Hits 110,000 a Year

Yeast leads Aeronautical Training Society aircraft schools.

Training of pilots for the Army Air Forces has reached the 110,000 per year mark for the first time, according to Lieut. Gen. Barton E. Yeast, commanding the AAF Training Command.

General Yeast has completed a world flight of more than 25,000 miles, during which he visited AAF installations and observed in national American aviators who had received their training under his command. The AAF jumped from 21,556 officers and men in 1939 to 2,155,593 as of January, 1945.

**Airline Schools**—In tracking Army aircraft school operators who are represented by the Aeronautical Training Society, General Yeast said: "We have built up this great air force in far less time than anyone had ever dreamed possible. From now on our training will be confined to furnishing replacements."

Of the 64 ATTS schools engaged in primary flight training for the AAF since 1939, about 11 have completed their work, leaving only 42 schools in operation, and by the end of August the number will probably go down to 39.

## Plane Costs Cut 15 to 35 Per Cent, East Coast AWPC Survey Shows

Savings effected by manufacturers are in addition to the more than \$100,000,000 returned to government in 1942 and 1943.

War prices of planes built by aircraft manufacturers in the East Coast Aircraft War Production Council have been reduced from 15 to 35 per cent, in addition to more than \$100,000,000 returned to the government in 1942 and 1943, a study of production savings reveals.

A substantial portion of the \$100,000,000 returned to the government was in voluntary rebates made after production experience showed true cost factors, while the remainder was turned back as a result of renegotiation between service officers and manufacturers.

**Costs Scaled Down**—Largest savings came in the scaling down of the purchase prices of the planes as production efficiency and improved economies of operation were reflected in total costs.

The East Coast Council survey showed that a large number of contracts, originally negotiated on a fixed fee basis, have been changed to a fixed price basis as manufacturing experience permitted more accurate determination of the actual cost of production. Members of the council are Aviation Corp., Bell Aircraft, Chance Vought, Curtiss-Wright, Eastern Aircraft Division of General Motors, Fairchild Engine and Airplane Corp., the Glenn L. Martin Co., and Republic Aviation Corp. In addition many subsidiaries of these companies are members of the Council.

**Fixed Fee Basis**—In some instances the fixed fee basis was adopted at first because experience needed to determine actual cost was lacking. This was particularly true in the manufacture of new types of aircraft and equipment, a common application being, pointing out that such costs as labor, material, engineering, subcontracting and training were unknown in the beginning and that manufacturers for that reason had to gain knowledge through actual production. Cost of design changes required by combat experience also was a varying element.

The council spokesmen emphasized that the fixed fee contracts do not prevent the plane maker from earning a profit above the costs of

manufacture, but instead call for him to receive a fair return of a fixed amount above the probable, but undetermined costs. Determination of this fee is arrived at by Army or Navy contract officers working with the manufacturer.

Costs may vary, but the fee is not increased by higher costs, as were the contracts of somewhat similar nature in the World War.

**Extra Costs Absorbed**—In fixed price contracts, added costs must be absorbed by the manufacturer, while lowered costs usually are reflected in renegotiation proceedings to prevent excessive profits.

Costs under the fixed fee contract are more likely to be higher than those under fixed price contracts because of the volume of auditing procedures and added manpower for bookkeeping and other non-manufacturing duties, it was pointed out, but otherwise there is little to choose in costs under the different contracts.

## Stocker Improving

Alexis Rathford Stocker, foreign relations director of Fairchild Engine and Airplane, is recovering in a Washington hospital from a bullet wound that resulted in the loss of an eye. It was not known last night whether the sight in the other eye could be saved.

Mr. Stocker was found in his apartment by an associate, Alfredo di Las Rias. He had been shot in the temple.

## DC-3's Role in War

Seven thousand Douglas DC-3 type planes have been manufactured by Douglas Aircraft Co. for the armed service, it was disclosed last week when the Douglas company released data showing that 60 percent of multi-engine planes used by the Air Transport Command are Douglas type DC-3s.

Virtually all the planes used by the Troop Carrier Command are combat transports of the DC-3 type, and more than half of all planes used by the Naval Air Transport Service in its world-wide operations.

## 250,000 Casualties Evacuated by Air

Maj. Gen. David Grant, AAF Air Surgeon, reveals that almost 250,000 wounded and sick from Europe have been evacuated by air.

More than 250,000 sick and wounded American and Allied troops have been evacuated from battle areas by air since Pearl Harbor, it was revealed last week by Maj. Gen. David N. W. Grant, Air Surgeon of the USAF.

The rate has reached 1,000 a day, General Grant revealed, while Lt. Col. Richard L. Neilling, attached to the Air Surgeon's office, disclosed that patients are being moved by air from hospitals in India to this country in less than one week, as compared with two months or more required for sea evacuation.

**From Normandy**—General Grant disclosed that more than 7,000 wounded were evacuated from the Normandy Peninsula in the first three weeks of the invasion with air operations beginning on D-plus-4 as soon as the first ship for C-47s could be built by air engineers.

Last year, before the peak of air evacuation operations had been reached, 113,000 men were moved to sick areas by air in planes ranging from small reconnaissance biplanes to giant C-54s for transoceanic operations. In a recent month 3,499 patients were brought to this country.

## Wagner Returns To Pacific Front

Brig. Admiral Frank D. Wagner, commander of famed Pacific Navy in the Java campaign, has returned to the Southwest Pacific as commander of aircraft of the Seventh Fleet supporting General MacArthur's operations northward to the Philippines. Admiral Wagner, like MacArthur, has a score to settle as the return engagement in the Philippines, the two squadrons of his patrol group having been virtually wiped out in fighting with the Japanese in the Philippines to Australia, saving only three Catalinas of the 33 planes in the original Patrolwing 13.

**Served in Capital**—He has been serving in Washington as Assistant Deputy Chief of Naval Operations (Air), the first to hold that post when Vice Admiral McCain became Deputy Chief of Naval Operations (Air).

## Airline Chiefs See Wide Post-War Gain

Forecast traffic increases from five to twenty times that of pre-war era at Denver conference.

By SCOTT HERSHEY

Top executives of the nation's leading airlines, meeting in Denver last week at the Air Traffic Conference, division of the Air Transport Association, forecast that air traffic will be from five to twenty times as great after the war is behind, with an increase in air express and much of first class mail carried by plane.

Charles E. Beard, vice-president of Braniff Airways and president of the conference, presided at the two-day session, which featured a luncheon commemorating the tenth anniversary of Continental Air Lines with headquarters at Denver. Edward Leasure, chief examiner of the CAB, was the principal speaker.

**Fixed-War Plans**—Post-war proposals as related to commissions for sale of air travel and general industry viewpoints on air travel plans were thrashed out at the closed meetings. A standard sales agency agreement was drawn covering relationship between agent and carrier.

While the emphasis of the session was on commercial air transportation, Leasure remarked that the airlines' executives that they sometimes had a tendency to lose sight of other phases of civil aviation, including the private flyer, fixed base and charter operators, pilot training schools and sales and service agencies.

**300,000 Private Flies**—Leasure made a relatively conservative estimate of the growth of private flying, indicating that there may be 300,000 private airplanes in the country from six to ten years after the war.

Of commercial air transport, Leasure said that naturally the war had a greater effect on international operations than on domestic, but that nearly every segment of the government is actively interested in the future expansion of foreign air routes and that while debate on questions of policy involved his men vigorous, all are agreed that the expansion must be planned. He stressed the post-war challenge of competition in the international air transportation field.

**Dominant Side**—He and author-



**Air Traffic Conference Officers**: These four men are at the helm of the Air Traffic Conference, which met last week in Denver. Left to right they are N. B. Fry of United, first vice-president of the conference; Charles E. Beard of Braniff, president; Yem Wolfe of Western, second vice-president; and M. F. Rodgers of the Air Transport Association, secretary.

used air service within continental United States totals about 55,000 route miles and reaches 300 cities and towns. While public opinion belated commercial air transportation would be extended to every hamlet after the war and provide innumerable jobs in the reconstruction days, Leasure said that aviation enthusiasts frequently overlook the fact that in general the small airports have had more than the airlines will be faced with the most intense kind of competition from the railroads, bus companies and private automobile and it will be facing this competition with its principal selling point—speed—greatly diminished in value.

At the luncheon session, which was under the joint sponsorship of the Denver Chamber of Commerce and the Denver Chapter of the National Aeronautics Association, of which Harry Anshel is president, Robert F. Six, president of Continental accepted a tenth anniversary award from the Chamber of Commerce.

## Canadian Car Expands

An aircraft and accessories service division of Canadian Car and Foundry Co., Ltd., has been organized to service aircraft instruments, dual indicators, gyrometers and precision measuring tools, and will install and service radio equipment and other electrical accessories in aircraft. The company has announced. The new division, at the St. Laurent plant in Montreal, is directed by G. C. S. Wallace.

## U.S. Ports Doubled Under CAA Plan

Burden, in radio talk, says Congress is to be presented in Congress is based on aviation needs five or ten years after war.

Assistant Secretary of Commerce William A. M. Burden last week gave radio listeners a glimpse of the scope of the national airport plan prepared by the Civil Aeronautics Administration, soon to be presented to Congress as a report.

The plan shows that twice the present 3,000 airports will be required in five to ten years after the war, plus improvement of 4,000 existing fields. Of the 3,000 new fields proposed, 2,000 will be of smaller classes. The plan would give 1,532 extra airports capable of accommodating air transport operations.

**Efficient Dollar Job**—Burden said the total cost was estimated at slightly over a billion dollars—\$600,000,000 for large airports and \$370,000,000 for smaller fields. He pointed out that no legislation or appropriations exist to translate this plan into facts, but that pending legislation for Federal-State cooperation in financing airports seemed desirable.

Burden said every community should have some agency studying its airport problem. He stressed that the rapid action plan construction of a national system of airports both for commerce and national defense, but said Washington can't do the job alone.

## CAA Role in AAF's Airways Revealed

Borneo tells of comprehensive work in site selection, construction and radio installation at 204 locations outside U. S.

The role of Civil Aeronautics Administration engineers and technicians in setting up the world system of airways required by the Army and Navy was disclosed last week by Thomas W. Bourne, director of Federal Airways, who said CAA has participated in site selection, construction, or radio installation at 204 locations outside the United States.

**Technical Advice.**—Actual construction of long range stations was accomplished by cooperation between the Navy's Seabee, the Army Air Force, the Army Signal Corps, the CAA, and in several instances, the British Signal Corps. The technical advice and experience of CAA engineers contributed largely to the completed effort to make this world-wide airway system possible.

The major portion of the Administration's work was in the installation of radio ranges, 40 of which were removed from points in the U. S. and installed in foreign stations. CAA personnel now are operating 70 of the 204 installations in which the Administration assisted.

In 1943 and 1944, Bourne said airways were constructed from Miami to India via South America and Africa, and from the United States across Europe to Alaska, north to Ireland, Scotland and Wales.

**Pacific Area.**—In the Pacific area, the CAA installed range equipment for the Navy at various locations including Tahiti, Tulagi (Solomon), Christmas Island, Fanning, Nandi, Espiritu Santo, and Guadalcanal. The CAA also installed 14 landstations for the Navy in South America. These are now operated by CAA personnel.

In Alaska, where the CAA has been working for several years, a 4,000-mile airway system existed at the outbreak of war. This has since been extended to 7,000 miles. Six Alaska Commanders will be merged with CAA stations.

**Foreign Locations.**—Radio range stations removed from points in the U. S. to foreign locations, Bourne said, included the following: Bilken, W. Va., to Cairo, Egypt; Dythan, Al. to Karachi, India;

Yonkers, Tex., to Canton Island; South St. Marys, Mich., to Fiji Islands; Norman, Mass., to Salala, Arabia; Garden City, Kan., to Dakar, French West Africa.

## Chinese Plant Ready To Make A-26 Parts

Douglas Aircraft Co.'s subcontractor China Aircraft Corp. will begin production of A-26 bomber attack bomber components in San Francisco next month. By the year end 3,600 Chinese are expected to be working in the plant, financed by \$400,000 DPC loan.

Credit for development of the project goes to a 25-year-old Chinese aircraft engineer, Dr. Hsiao Keng-Chia, founder, director, vice-president and chief engineer of the organization.

Dr. Hsiao submitted plans for the enterprise to Minshing Kiao-Khai in Los Angeles in 1943, when Chungking Government approval and then spent 19 months in development, negotiating with the State, War, Navy and Treasury Departments as well as interested American and Chinese boards and commissions.

China Aircraft is owned wholly by 18 large Chinese families having headquarters in San Francisco, and its board chairman is Shuck Ho, president of the San Francisco branch of the Chinese Association for the Promotion of Aviation.

## Budd to Finish 26 Steel Plants

When the Navy contract with Edward G. Budd Manufacturing Co. is terminated on September 28, a total of 28 Castelco-type lines will have been built by the company. This Castelco is the unique twin-engine, welded stainless steel cage warplane.

The Navy reports that the Army Air Forces has agreed to supply it with enough R4Ds. (Douglas R4D is to fill possible need.)

**Red Ordered 268.**—The Navy had on order 200 Castelcos. Since it will receive only 26, it can be assumed that the Army will turn over about 138 R4Ds to the Navy from the Douglas production line. The 138 Castelcos being acquired by the Navy will be utilized by the Naval Air Transport Service as utility ships to fly cargo and passengers. They will operate on regular NATS scheduled flights. In addition, the Castelcos will be used to break in NATS crews who will fly scheduled trips.

## Navy Backs ACCA's Air Power Policy

Navy Department was on record last week in endorsing the air power policy of the Aeronautical Chamber of Commerce. Assistant Secretary for Air A. L. Gates told the Senate War Committee Subcommittee that the Navy supported the principles set forth by the ACCA and also favored a new examination of the relationships of the service and industry by a new Moore Board representing Congress, the armed forces, the aviation industry, labor and other interested groups.

Mr. Gates also told the Murray committee that a declaration for a strong post-war Navy with its closely integrated air components, would be of great benefit, enabling industry to plan its production and experimental work for the Navy. The settlement of post-war problems, he said, will enable aircraft manufacturers to concentrate on completing their jobs so that the Navy will have the weapons to finish the job.

## TELLING THE WORLD

• Walter Kilde and Co., Belleville, N. J., announces the opening of a new office in Washington, D. C. Recently John M. Noble who for the last four years has been manager of the Aviation Department of Kilde, has been appointed district manager in charge of the new West Coast office. Noble was formerly manager of the flight instruments department of Kilde and was in charge of the first division of Bendix Aviation Corp. He also has served as a pilot for Pan American Airways.

• Ray Bell, director of public relations for Pennsylvania-Central Airlines, has been elected a member of the board of governors of the Advertising Council of Washington. Bell announces that Paul Benedict has become news photographer for PCA. The National Advertising Agency recently awarded second prize in the "Best Employee" contest to the "Know Your Company" booklet issued by PCA to all new workers.

• Grumman Aircraft Engineering Corp. appoints Charles W. Hepf Co., New York. Media will be newspapers and magazines.

• Assistant of Power Co. Brand, S. A., has been selected by the H. D. Jenkins office of McCann-Erickson, Inc., for Brazilian advertising.

• Saunders Aeronautics, Inc., has given its second to Burke Dowling Adams, Montclair, N. J.

## Chicago Port Plans Ready in 90 Days

Work on new \$1,200,000 municipal field expected to start in about three months.

Plans for the new \$1,200,000 Chicago municipal airport terminal being built jointly by the eight airlines serving the city are expected to be completed within 90 days and construction may begin shortly thereafter. Mayor Edward J. Kelly is reported to have received assurance from Washington of necessary priorities on materials and equipment.

The new structure will be built on the unit terminal plan of which Albert F. Heine, United Air Lines architect is the leading exponent, and may be the first of this type to be completed. Denver, Dallas, and Chicago also are planning terminals of this type which will permit additional and double-decked as expanded needs require.

**18 Plan Gates.**—While present runway capacity of the field would permit 30 plane slots against 14 at the terminal, land-use plans call for 18 plane gates, to be built to DC-4 proportions in a fair average size, with a plan for expansion to full capacity later as it is needed.

A committee of airline representatives working on the arrangements include a building committee of which Heine is chairman, and an agreement committee to handle finance and business headed by E. M. Wilcox, president of the United. Other members of the building committee are: E. H. Stetson, American; R. M. Huber, TWA; F. B. Marsh, Northwest, and Walter Frankish, Eastern, and the following representatives of airlines: C. F. Wick, CWA; W. G. Gabelet, CAB; R. M. Lewis, Braniff; J. D. Crockett, United; H. Selmer, American, and T. M. Sullivan, TWA. Other members of the agreement committee are: Ken Goren, American; Robert J. Wilson, PCA, and A. M. Jean, Jr., TWA.

**Architects at Work.**—The Chicago firm of Shaw, Nason and Murphy, architects, has been selected to prepare plans for a partially sectional terminal building, which is expected to use large amounts of glass and steel with relatively little masonry. Besides providing operating work terminals for the airlines, and parking for the city, the project will include a CAA-operated control tower, a central distribution building for

mail and express and restaurant and other facilities for the public. Close coordination between the airlines and the city is being maintained by John A. Casey, assistant airport manager, and the airlines are planning to name a full-time coordinator to represent them as the project progresses.

## Geuting Clarifies Airport Program

Denies conflict between CAA and Personal Aircraft Council on number of facilities needed

There is no basic conflict between the Civil Aeronautics Administration and the Personal Aircraft Council in their viewpoints about landing facilities for private planes, Joseph T. Geuting, Jr., director of the latter group, told Chamber's general plane division, pointed out last week in a letter to CAA Administrator Charles I. Stanton.

Stanton, in recent speeches, has been telling the CAA plan for 6,000 airports, while Chamber told the New York Council, a regional group, that 30,000 airports would be needed after the war. It appeared that the two were in conflict, although actually, Mr. Geuting states in his letter, they are not.

**Chairman's View.**—"I think the basic difference in thought," Mr. Geuting told Stanton, "revolves around the planning for and kind of landing facilities which we are talking about. The Personal Aircraft Council's plan is to arouse in the community an interest in their responsibility to provide a landing facility suitable for the personal or private aircraft. . . you of course know that we are not talking about airports in the same sense as you are talking about airports."

When discussing what he chooses to call "super" facilities, Geuting from the larger, more complex type of landing facility. I know that you are urging that the great majority of airports, which now need be built, are Class One sites, i.e., the through back of the CAA plan is to be communities together with airports, whereas the basic thought back of the Personal Aircraft Council plan is to see that every community in the country, regardless of size or importance, has a landing facility suitable for the use of personal aircraft."



Sperry Corp.'s new attitude gyro

to provide pilots with precise attitude indications throughout 350 degrees of roll and pitch. With the new instrument it is possible to accomplish all attitude maneuvers without visual reference to the earth's surface.

## Shorter Week Falls To End Absenteeism

Reduction of work hours, made in an experiment to combat absenteeism in the Cleveland Fisher Aircraft Plant No. 4, has failed and the plant is resuming a full 36-hour week after a month on a 30-hour week.

The 30-hour week was put into effect to give workers Saturday afternoon off to do personal business such as shopping. But absenteeism in the plant produced major uneasiness for the U-S-39 continued with little change. The plant also is engaged in work on a highly secret experimental fighter plane. Most absenteeism occurred on Saturdays and Mondays, with little change noted under the reduced time schedule.

## Douglas Plant Burns

Fire last week destroyed the two-story administration building of the Chicago plant of Douglas Aircraft, resulting in damage placed at \$1,500,000. The main manufacturing division plant, producing C-54 transports for the services, was only slightly damaged, although flames for a time threatened to spread to the \$35,000,000 structure.



## 3 Biplane Types Left

The only three remaining biplanes produced by the U. S. aircraft industry, by old companies, are still in Wichita, where Boeing and Beech (formerly Stearns) remain. The third is Waco, the letters of which stand for Weaver Aircraft Co.

Duke Weaver made his early beginnings in Wichita, and later moved to Troy, Ohio. It was as a student here, at South Wichita, that he and his brother, Alvin, began to build aircraft. Alvin, who is now in the U. S. Navy, has been working on the design of a new biplane, which will be ready for production in 1945.

They will weigh heavily in any small plane plans that may be promulgated. But the present Boeing Aircraft Co. of Seattle, with its great engineering and development facilities, and especially its continuing commercial and technical investigation of the possibilities in aircraft and a wide range of durable goods, will extensively determine, and integrate with, the Kansas program.

Wichita officials are well aware that the name of Boeing as any design they choose to build will receive wide public acceptance from the start. They feel that this acceptance is justified by years of successful operations.

**Double Madhouse Market**—But these spokesmen are frankly doubtful concerning the practicality of aircraft for a large number of business and personal uses. How will purchasers justify the large first cost of well-made planes? They ask "How long will they be willing to foot the operating and maintenance bill? Where will they fly? And why? And what will they do? How will they meet the problem of weather interrupting their plans?"

The nation will be in heavy debt, and will have to rehabilitate itself. Most people will need all their money to replace necessary personal property, and so working capital. Retaining service men generally will have nothing but their jobs.

**Credence**—Boeing men say they have full confidence in the potential large-scale development of aircraft use. They think business will be good if the Government handles its share of the transition problem wisely. They believe that many individuals can afford and will fly private airplanes, and that a large number of business firms will buy and use them probably, many to perform a real service, none for promotion and publicity.

The only standard by which the post-war aircraft volume can be judged, they say, is the power record, plus improvements in range and in ground facilities, which will improve utility. The volume will be greater from the outset than it was before. How much greater, no one can guess. Costs and prices in the actual post-war period will be higher than in 1942, due mainly to high wages.

**Design Change Unlikely**—Boeing engineers have been devoted to "heavy" design since the company's inception. It is most unlikely that they will change policy in favor of design that would fit into lightplane low-price brackets.

The Boeing Kaydet trainer is in the heavy, quality class. Its continued development and manufacture since 1935 has contributed extensively to experience which will be directly useful in any small plane produced by the company in the future. But it is a military design and, as airplanes go, it is getting old. Comments of company engineers indicate it will not be used as the basis of future commercial airplane development.

**Post-War Plans**—It is a safe assumption, confirmed by remarks of company officials, that Boeing has, on paper, at least, several proposed designs for personal and other non-scheduled purposes, and including, of course, airline and military equipment.

During conferences last fortnight with Boeing people at Wichita, the writer was told that the Kaydet trainer, which is furnished identically to both Army and Navy, is not believed suitable for extensive surplus re-sale for its original use. It carries only two, and has open cockpits. Allowable low cruise is only 400 planes, plus light baggage.

**Surplus Market**—If surplus Kaydets are offered in low enough price, many pilots (thousands trained on them) will bid them in for personal use, with more or less satisfactory results. Part will be high but parts will be cheap. Many established aviation schools, like the Boeing school at Oakland, Pease, and Beverly-Hills, are reported already inquiring for surplus Kaydets. They have had experience with them, can figure costs and surplus value in advance, and they know that steady construction permits many trainees to walk away from accidents. These schools need such planes for turning out pilots with professional reliability. Many grasshopper type of schools, in which students pay low fees, can scarcely afford to fly Kaydets, even at low purchase and parts cost.

Though the Kaydet is old, it is still excellent by any other trainer in the favor of the air forces. In numbers delivered to Army and Navy, it is far in the lead of all trainers, and is widely used abroad for the prospects for continued acceptance in postwar military use. It is the favorite air force, as well as in foreign air forces, as well.

**Production Rate**—In 1940, Kaydets were rolling off the line at the rate of 12 a day, or more than 300 per month, at the Wichita plant. The high rate was 18 in 18 days. Working around the clock, with



Boeing's "Kaydet" Trainer: Experience piled up in continued development and production of this middleweight quality plane, since 1935, would be said to advantage by Boeing in design of models for private business, personal and other non-schedule uses.

unlimited supplies, the plant could have delivered 600 a month.

At present, Kaydet production has been cut back to 60 planes a month, plus parts equivalent to about 35 planes, or 100 per month. The production and assembly have been compressed into corners and sidelines, to make room for B-28 operations, to prevent the surprise even the plant management.

**Started in 1935**—Since the original XP-1-343 biplane of 1935, the

trainer, undergoing slight changes, has been Army's PT-17, then the famous PT-17, and now PT-17-3D, and Navy's NO-1, now N2S-5.

## San Francisco Maps Lightplane Parks

Steps to provide San Francisco with facilities for individual airplane owners and operators, are expected to be taken soon by city officials.

An aerial problem will be selection of landing field sites within reasonable distances from residential sections. Also, California airport laws will be investigated to determine whether they should be modernized to permit the city to participate in the Federal airport planning program.

**Conference Scheduled**—With his major task one of coordinating activities of municipal departments, Mayor Roger D. LaPrade is scheduling conferences with the San Francisco Chamber of Commerce, Aviation Committee, CAA authorities and others.

San Francisco's municipal golf course has been suggested as a possible site for a lightplane field, and surveys will be made to determine if seaplane facilities might be developed at Yacht Harbor.

## New Goggle Lenses

New single-window goggles with interchangeable lenses for various types of weather are being issued by the Army Air Force.

The new type goggle mounts clear lenses for good protection given lenses for sunny days and amber lens for hazy days. It is designed as a standard single of vision. It is supplied by Polaroid Corp.

Fans 18,000 Mark: Deliveries of the Boeing Kaydet trainer, now produced identically for the Army and Navy, have passed 18,000, with current output at the rate of 100 a month.

## PERSONNEL

Cassey D. Vester has joined Consolidated Vultee Aircraft Corp. as staff assistant to the head office in San Diego in charge of sales research. Vester was a power pilot on the terminal pickup service with All American Aviation and was formerly aviation director of the state of Pennsylvania.

William F. Evenden, president of the San Diego Junior Chamber of Commerce and former gas company engineer, has joined the public relations staff of Ryan Aeronautical Co., San Diego, to specialize in the preparation of technical aeronautical information for national magazines.

L. C. Perkins has been named director of the contracts division of Kellett Aircraft Corp., and Harold A. Buehn has been appointed products engineer, succeeding Paulin. Before joining Kellett in 1943, Perkins was associated with American Steel and Wire Co., Hudson, has been with Kellett since 1943.

E. F. Lauer, manager of the Federal



### NEW AAF STAFF CHIEF

Brig. Gen. Aubrey Horsch, who has been named chief of staff of the Army Air Forces Central Flying Training Command, succeeding Brig. Gen. Luther S. Smith. General Horsch reported to the Randolph Field headquarters after having served as commanding general of the 32nd Flying Training Wing at Pecos Field, Tex.

Department of Sperry Gyroscope Co., now heads the new special electronics department, handling sales activities of electronic equipment for the ground forces of the Army.

Norris E. Craig has been named promotional advertising representative for United Air Lines, based in New York. Mr. Craig was previously engaged in publicity and advertising activities with the Johns-Manville Sales Corp., Silver Spring, Md., and the American District Telegraph Co.

Harold Glushko has been appointed supervisor of payroll accounting for United Air Lines in Chicago. Before joining United, Glushko was with the Rolland Furnace Co., Rolland, Mich., for eight years.

Raymond Francis Gossau has joined the public relations staff of Pennsylvania-Central Airlines in Washington. He has been with Springfield (Mass.) Republic, the Berkshire (Mass.) Courier and the United Press during ten years in the field.

Lawrence Nichols of Edmonton, Alberta, has been appointed traffic representative for Western Air Lines in the western Canadian region. Nichols was formerly a British Columbia salesman and manager for the Canadian Greyhound Lines.

Brig. Gen. Robert H. Webster, formerly commanding general of the 1st Air Force Support Command at Mitchell Field, N. Y., has been named deputy commander of the 15th Army Air Force, in the North African theater under command of Maj. Gen. John K. Cannon. At present General Webster is commander of a Miscellaneous Bomber wing and the Allied garrison at Bardonia.

## THE NEWS VIEWS—



A. A. Vollmecke

The industrious chief of the Aircraft Engineering Division of CAA's Bureau of Safety Regulation has been a pilot since 1933 and he reflects few weeks of good flying weather during the year to increase his time.

Born at Osnabruck, Germany, in 1903, he graduated as a mechanical engineer from the Technical Institute at Braunschweig (Brunswick) in 1923, with post-graduate work on light alloy pistons of high speed internal combustion engines. During his school years he participated in airplane design and flight competition.

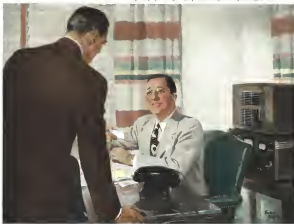
After coming to the U. S. in 1927, to join the old Command-Aire Co., he worked with Dr. Ernst Heinkel. His promotion as chief engineer of Command-Aire came in 1932. His model A-2-3 was, in accordance with the official report, the only standard production plane to pass the qualifying tests of the Daniel Guggenheim Society Contest of 1929. A racing plane of his design in 1930 was the All-American Flying Derby of more than 3,500 miles by a margin of 4 1/2 hours.

After operating the Alve Aircraft & Mfg. Co. at Little Rock, Ark., manufacturing, repair and maintenance base, Mr. Vollmecke joined the engineering section of the old Aeronautics Branch of the Department of Commerce in 1935 and eight years later became the head of the Aircraft Engineering Division of CAA.

The Vollmeckes have two sons, 16 and 13, and the older one already follows his dad's hobby of winging and flying, and building model planes. The senior Vollmecke is a quiet, burly man and member of several NACA committees.

W. J. HALLIGAN, President,  
HeliCrafters Radio ...

Mr. Halligan says, "There is no one who is building radio communication equipment in this war category a tremendous demand in the future for radio and radio lighters for planes in general, day or night use, and many other applications."



## "COMMUNICATIONS EQUIPMENT IS ONLY AS GOOD AS ITS POWER SUPPLY"

"Radio equipment needs an efficient, reliable power supply," comments Dr. H. H. H. "And for that reason, the radio industry is constantly on the alert for new and better power supplies and devices for adapting current line voltages to both power supplies and such devices as are of considerable value in the communication equipment manufacturer."

Electronic Laboratories has the most power supplies for use wherever current must be changed in voltage, frequency or type, or will engineer any to fit specific spots, weight and voltage requirements. E-L's Voltage Power Supplies offer many advantages for all current communication equipment up to 1500 watts as a result of advanced in circuit and design pioneered and perfected by Electronic Laboratories. E-L Power Supplies are definitely more efficient, and give substantially longer service life. In addition, they are highly versatile, permitting multiple inputs and outputs, any needed wave form, great flexibility in shape and size, and a high degree of voltage regulation when needed. They are economical in price and require almost no maintenance or maintenance. Their dependability is being demonstrated by day in the lighting house. E-L Laboratories offer complete service in power supply problems.

### E-L STANDARD ELECTRONIC TIMER MODEL 9-1372

For testing many types of circuits. Range covered to operate to high impedance, over a temperature range of -50°C to +40°C and with load and 100% tolerance. Characteristics: Input voltage, 110-240 VAC. Output voltage, 240 VDC at 1 ampere. Flashing frequency, 30 cycles per minute.

Dimensions: 7 1/2" x 4 1/2" x 1 1/2". Weight 1 lb., 13 oz.

Also available for 12 V. DC light voltage



**Electronic LABORATORIES INC.**  
CHICAGO, ILL.

VARIABLE POWER SUPPLIES AND LIGHTING COMMUNICATIONS AND ELECTRIC MOTOR REPAIRING • ELECTRIC, ELECTRONIC AND OTHER EQUIPMENT

## THE AIR WAR

### COMMENTARY

## Allied Air Blockade Eases Job Of Invasion Forces in France

Same tactics used in Africa, Italy and Southwest Pacific are employed in isolating enemy in Cherbourg peninsula.

Despite superficial differences and widely varying external conditions in the European, Mediterranean and Asiatic-Pacific theaters of operations, most of the principles of air warfare remain the same.

Visible among them is the principle of air blockade. It is now known that one of the biggest factors in preventing strong German reaction on the ground and in the air against the initial Allied landings in Normandy was the systematic cutting to pieces of enemy communications.

Repeated blows at freight yards, rail installations, locomotives and freight cars, and bridges across the Seine below Paris, and important rail junctions on the main lines feeding through Paris, plus a large number of attacks on road junctions and airfields, served to isolate the battlefield and a continuance of the process tended to keep it isolated June's worst weather for 40 years cut down the effectiveness of this air blockade, but on the whole it is seen to have worked exceedingly well.

A similar operation strangled

## Quick Refueling

Fighter planes of the North Air Force are completing four or five missions a day over the front in Normandy through use of new landing strips on which they can be refueled and repaired in 30 minutes. It was disclosed last week.

The runways are 1,500 feet long and enable fighters to operate over the French area without auxiliary gas tanks. Generalissimo of the North Air Force went aboard an airplane day to begin the work of building the strips on previously selected sites.

Kesselring's forces in Italy, leading to the break-through on May 11, rapid conquest of Rome and well beyond, with Axis leader's goal of destroying the German armies in Italy now a reasonable possibility.

While criticism of the Italian "stalemate" was mounting both in England and in this country, resolute German action from as far back as February told of massacre of medium bombers and fighter-bombers from General Canino's Tenth Air Force (one of General Eisenhower's Mediterranean Allied Air Forces) smashing bridges, tunnels and railroad tracks at hundreds of places north of Rome, and bombing ports and shipping so as to reduce to a trickle the supplies needed by Kesselring's 30 divisions, estimated at about 3,000 tons per day during their halting operations. Some 20 percent more than this would be required under full combat conditions. By a resolute effort extending over six or seven weeks, all communications were so slashed that finally supplies could come only by truck and by night.

**Revolution**—Photos show wreckage of locomotives, freight cars and trucks in the little short of fantastic. This meant losing scores of targets repeatedly as resourceful German engineers and repair groups got the stuff rolling again. One important bridge was wrecked and after eleven weeks of hard work by night and day was repaired, a few hours later it was wrecked again. As a result of all that the combined assault on May 11 was far more successful and far less costly than would have been the case without the air blockade. It was the story of Taranto, one year earlier, all over again. Different setting, but the same principle. **Landings in New Guinea**—For a



ESPIRITU SANTO AIRFIELD:

Aerial view of Espiritu Santo, in the southwest Pacific, where the AAF has hacked out a model airfield, with long grass and well-kept roads leading off.



U. S. Army Air Force Photo of B-29 Super Fortress

## FRIEND AND FOE

To all Americans, to the people of all Allied Nations, to the millions of oppressed citizens of occupied countries—the sleek and massive B-29 is a new and powerful friend. The thunder of its mighty Wright engines and the long, graceful sweep of its wings are a thrilling reminder that now more than ever the days of the Axis are indeed numbered.

To the perpetrators of this terrible world conflict—the same B-29 is a frightening, relentless foe. No spot on the face of this earth is beyond its reach... no power can prevent it from releasing its load of destruction exactly where and when it wants. In these quarters the B-29 is far from popular.

The men and women of CECO are proud and happy that the carburetors and fuel pumps they manufacture are a part of America's newest and greatest warplane. This is their most direct contribution to Victory.



CARBURETORS  
FUEL PUMPS  
PROTEK-PLUGS

CHANDLER-EVANS CORPORATION SOUTH MERIDEN CONNECTICUT, U. S. A.



#### C-54s BRING WOUNDED BACK TO AMERICA:

American troops, wounded in the New Guinea campaign, are shown being taken out of an Army Air Transport Command C-54 for transfer to air ambulances on arrival at Mitchel Field.

really different setting, have a look at what has been happening down under. Col. Merion C. Cooper, chief of staff of the Advance Echelon of the Fifth Air Force, has described the air blockade as "D to the 24th Power." "D" standing for Destroy as used in five ways.

[Col. Cooper was executive to Brig. Gen. Martin F. Scanlon, first A-2 on the newly organized Air Staff in the summer of 1945, after Pearl Harbor Cooper was chief of staff on General Chennault's China Air Task Force.]

Here is the formula: (1) Destroy the enemy's air power. (2) Destroy his AA defenses. (3) Destroy his airbases. (4) Destroy the enemy's living quarters and areas of his personnel. (5) Destroy all his stores and installations.

This sounds like good Teller stuff, and is another example of the fact that the top air strategists and tacticians, Spauld or Teller, Chennault or Kinnear, tend to use air power in the same general terms. The battle of the Bismarck Sea was really an air blockade. So was the leapfrog operation in New Guinea this spring which knocked out Wewak, and then permitted a surprise jump of some 300 miles from Sado to Hollandia, a distance greater than the whole Southwest Pacific forces had been able to move in the two years since March, 1942.

**Surprise Pays Off Again—Wewak**, one of two principal enemy

air bases south of the Equator, lay about half-way between Sado above the Bahr Peninsula, and Hollandia, Dutch New Guinea, the other principal Jap air base. Between Mar. 10 and 25 May, Gen. Erwin Whitehead ("Boss the Moose"), commanding general of the Fifth, struck at Wewak, going after

the objectives in the order named. Eighty-nine enemy planes were destroyed in the air and scores more on the ground. On Mar. 25, two days before the final strike, the Jap forces began evacuating Wewak through the back country as constant air patrol had completed the air blockade by cutting off his reinforcements by land.

Then, between Mar. 30 and Apr. 15, seven great strikes completely smashed up Hollandia. The Jap was caught off base flat footed. He expected our forces to occupy Wewak, not to leapfrog over it to Hollandia. A big element in the surprise was the unleashing of the new longer range Lightning, the P-38's with more powerful engines, improved supercharging and built-in leading edge machine tanks; fighters they had been flown early to Wewak, 300 miles from the nearest fighter base. When the Liberators struck Hollandia in force on Mar. 28, of some 140 fighters at the various airfields 40 came up to intercept and 20 of them were promptly shot down by the soaring Lightnings. The same thing happened the next day, and as a result of the two days' strikes 218 enemy planes were destroyed or damaged, while we lost one P-38. The rest of the story is well known, and before the end of April, MacArthur's forces were 500 miles nearer the Philippines.

NAVIGATOR



#### LST UNLOADS CUB IN NEW GUINEA:

Paper Cub being wheeled out of an LST somewhere along the shores of New Guinea. The ragged little planes are passing from around the world as artillery-spotting and beam ships. Here the mouth of the LST disgorges the tiny plane.



## If it's Rubber, Metal or Plastic Check Firestone First

Our greatly expanded manufacturing facilities place us in a position to meet rigid production requirements for aircraft parts, such as: Tires, wings, pilot and bombardier seats, bullet-sealing fuel cells, seat pads, parachute rafts, shatter-proof high-altitude oxygen cylinders, landing gear and many other products of rubber, metal or plastic.

The new Firestone Aircraft Engineering and Products Data Book is now available to executives of the aircraft industry. If you do not have a copy, write Firestone Aircraft Company, Akron, Ohio, or Los Angeles, California, today. It will show you the diversified production facilities available to you.

Scene in the Vicinity of Firestone with Richard Crooks and the Firestone Engineering Division, busy Monday evening over N.B.C.

Copyright, 1944, The Firestone Tire & Rubber Co.

# Firestone

## AIRCRAFT COMPANY





## How far do people fly?

Today's news is full of spectacularly long flights. Less newsworthy but no less important are the daily operations of our domestic airlines—for air transportation is a medium haul as well as a long haul business.

The average domestic airline passenger travels about 400 miles. To accommodate this traffic, transport airplanes break their journeys into short

hops. Before the war, 85% of domestic passengers were carried on hops of 600 miles or less. The Commando is particularly well fitted to serve this "85% group." While it is efficient for long hauls as well, its design gives it special advantages on the runs where the majority of people travel. Look To THE SKY, AMERICA! Curtiss-Wright Corporation, Airplane Division, Buffalo, St. Louis, Columbus, Louisville.

## Curtiss Commando

*Low Bidder for Tomorrow's Air Commerce*

## AIRCRAFT PRODUCTION

### Industry Studies Patterson Plan To Decentralize Aircraft Plants

Wisdom of Undersecretary's post-war defense proposal admitted but proximity to coast of factories furnishing raw materials, parts and supplies, and labor, housing and climate are factors to be considered, manufacturers point out.

Undersecretary of War Patterson's contention that aircraft manufacturing plants should be scattered in the post-war era passed a new problem for the industry last week. Most manufacturers viewed the suggestion as desirable, but are most concerned about the practical aspects of the decentralization urged by Mr. Patterson before the War Contracts Subcommittee of the Senate Military Affairs Committee.

It was the first time that the proposal for post-war general movement of the industry inland and scattering it through more easily defended territory had been broached publicly by a high government official and it may easily become one of the most widely discussed problems to be faced.

While on the surface it might

appear economically desirable to shift operations from the Northeast and West Coast to new plants located in the interior areas, it was pointed out that the facilities in the interior are superplants requiring a high overhead in areas in which other considerations had previously not been attractive, and are little more, if any, attractive now.

**Older Factors.**—The early aircraft plants were built in their present locations for extremely practical reasons, and these same reasons will apply with equal force in the post-war period, those close to the portland point out. Restricted operations will require that the companies utilize their plants least expensive to maintain in areas where the proper labor supply is located, where tax problems have been shielded, where good peacetime housing is available and

## Decentralization

Inland aircraft manufacturers are strongly supporting certain elements in the armed forces who would like to continue their plants in peacetime operation in preference to coast plants. They agree that if and when another aggressor attacks this country he will be well prepared, and he will not stop at Pearl Harbor or any existing base, but will hit our coast industries and population concentrations with power and determination.

Another point is that inland, in the inland agriculture and stock regions, is readily transferable to war production. One involved in the war of such a move will be the parent companies of the inland plants, most of which will want to retain inland operations in their own cost facilities.

It remains to be seen whether the Army and Navy in peacetime will have sufficient political influence to locate production strategically, or whether it will be located by winning power represented in Congress.

time housing is available and where climate is particularly suited to aircraft production.

It was suggested that the problem might be worked out by maintaining the inland facilities as



### OFFICIALS INSPECT BLACK WIDOW

Photo at left shows rear view of the new Northrop P-61 Black Widow, night fighter, first Army fighter revealed since Pearl Harbor. Right, rear entrance of cockpit being inspected by Lt. Col. T. Cohn, general

manager of Northrop Aircraft, Inc., and Brig. Gen. Donald F. Stone, commanding general of the Western Requirements Division of the AAF Materiel Command.





#### NEW PROP FOR MUSTANG.

This photo, newly released by the War Department, shows the new four-blade Dowprop propeller installed in the North American P-51 Mustang. This Mustang version also has a bubble canopy and other refinements expected to boost its already high performance rating.

reality: standby plants — each maintained by stipulated manufacturers as complementary production facilities to the poorly located — from the defense standpoint — home plants.

**Underground Plants** — Others suggested that the vulnerability of the present coast plants will soon be almost equally true of the inland plants, and that it may be necessary to be even more realistic about the dangers of future attacks and build underground factories to obtain a really needed degree of safety.

It was pointed out that some of the inland plants are so close to their location that the coastal plants—in the Detroit area for example—and that these plants, too, were established in their locations because of the practical recognition of labor, housing and other considerations.

Truly inland and southern manufacturing plants, such as Omaha Works, Fort Worth and Marietta facilities, still are dependent upon the vulnerable and northern industrial section for materials, parts and supplies.

#### Corsair Bomber

Plans of the Fourth Marine Aircraft Wing have been using the Corsair fighter as a fighter-bomber in Central Pacific action in the past few weeks. A single thousand-pounder is being attached under the fuselage.

The fighter-bomber Corsair is in action in the Marshall Island sector, where by-gone enemy bases are being kept neutralized by air action.

#### Price Formula Set On Machine Tools

A pricing formula for standard general-purpose machine tools in government-owned surplus stocks has been announced by the Surplus War Property Administration. The formula would return a maximum of 45 percent of cost to the government.

Price formulas for special types of tools will not be announced until later.

**Speed Production**—The objective in handling the machine tools, the SWPA said, is to get the machines into production as soon as possible and to avoid expenses from depreciation, obsolescence, warehousing and handling.



#### FIRESTONE AUTOGIRO EXHIBITED:

This self-rotating two-place autogyro, built by G. & A. Arrerrett, Inc., Wilkes Grove, Pa., Firestone subsidiary, was displayed recently by the parent company. General such models, with hovering speeds of 20 mph and top speed of 118 mph, were delivered to the British on a sample order and are now presented to Princeton University. G. & A., formerly Pitcairn Autogiro Co., is reported building a new helicopter.

Although procedures were not announced with the pricing policy, the SWPA announced that they will be driven to avoid favoritism, speculation or unusual distribution.

The formula for standard tools is worked out on two bases. In the first, where tools are not in the purchaser's plant, they are sold with an immediate depreciation of 15 percent, and further depreciation of two and one-half percent per month of use for the first six months, one percent per month for the next four months, and eight-tenths of one percent per month for the next 20 months. When tools are bought when installed in a plant, the price is five pounds higher in each age group.

**Buyers Pay Freight**—The price from which the formula will be worked is the tool manufacturer's original price complete with accessories, job maker's factory. Buyers must pay freight costs from storage centers. The formula for depreciation is worked from the date a machine originally was put in use to the date of the termination of the lessee's facilities contract, or to the time when the machine is withdrawn from contract, placed in storage or sold, whichever is earlier.

Carried to the full period of 36 months, used machine tools then can be bought from storage at approximately 45 percent of original cost or installed on a factory floor for approximately 50 percent of cost.



When Clifford's THIN-METAL KNOW-HOW discovered THIN ALUMINUM BRAZING... WEIGHT SAVING =  $\frac{2}{3}X$

By removing copper oil coolers and coolant radiators from one of their famous fighters and dropping in aluminum models — without any design change — weight-conscious engineers of the U. S. Army Air Forces saved approximately 120 precious pounds.

This vital victory over weight — symbolized by  $\frac{2}{3}X$  (where X equals the weight of soft-soldered copper coolers and radiators) — was made possible by Clifford's discovery of the elusive method of brazing aluminum tubes having very thin walls.

Already battle-tested on wide-speed fighting fronts, Clifford's Feather-Weights are now being applied to another Army Air Forces' fighter. Here the potential weight-saving is approximately 320 pounds.

Less weight, greater resistance to heat and pressure, longer life — are the results when aluminum replaces copper in aircraft oil coolers and radiators.

CLIFFORD MANUFACTURING CO.  
South Boston 37, Mass.



CLIFFORD

Feather Weight

OIL COOLERS AND COOLANT RADIATORS

Save  $\frac{2}{3}$  The Weight  
same size and shape

# The Birdmen's Perch



## SEE HOW EASY IT IS?

You send a Little Known Fact (About Well Known Plans), and if it's red-hot and we use it, you get a commission as a Perch Pilot (bottom rung). Then you send in some more!

After we've used 50 of your "facts," you get a promotion to Senior Perch Pilot. And we guess if anyone ever sends us 30 Little Known Facts that we care, we'll have to make them a Commanded Perch Pilot.

We want you guys to send those, too. (Even if you've sent a WASP.) Like the "Facts" before we picked up for this month.

## Major Al Williams,

also "Tattered Wing Tip," West Aviation Products Corporation, Gulf Bldg., Pittsburgh 30, Pa.

THESE PERCH COMMISSIONS ARE FREE, BUT IT TAKES A LOT OF WORK TO PAY FOR IDEAL COMMISSIONS!



## LITTLE KNOWN FACTS DEPT.

The "C-46" is the world's fastest cargo plane, in plan as well as in speed. It's a P-46 with the dependable belly tank rigged to carry cargo instead of fuel. It's

carried missiles, instruments, and medical supplies in New Guinea's delivered fresh meat in the Aleutians!

A C-46, captured by Bern at 11,000 ft. "The Navy's wing stripped down 2000 by Corsair for scoring missions in one hour!"

Oh, now you write the rest ones.

THIS IS HOW A CORSAIR STRIPS DOWN!



CHILLING, HORROR STORY (in 2 parts)

PART 1.

Ever get the old "yellow-belly" this way? You look out and see a "dot" of an building up on the leading edge! As you reverse it back for a no see ahead, you think laughably of the long, beautiful deuce boxes on the big ship! And how that "nose" the nose or giant light of the nose leading edge! And you sigh



and wish someone would put out a good five-cent deuce for light planes, as you consider your search for a no-see ahead!

## PART 2.

Now imagine you were in a cylinder. (Oh, come on... we'll be out in a minute!)

If you were using ordinary oil, you'd see a "dot" of oil-coated and continuous by-products building up on piston rings, lands, and grooves. And you'd see sludge forming... sludge that might get into the oil circulating system to clog tubes and screens. And you'd wish there was a standard in "perf" more of those carbon-and-sludge elements out of the oil.

Doesn't you know about the Ashlar Process, which does just that to GULFPRIME? Come on out of that cylinder, now, and service up with GULFPRIME.



Gulf Oil Corporation and Gulf Refining Company, makers of



OIL IS AMMUNITION—USE IT WISELY

## WPB's Revision of Order L-48 Studied

Manufacturers seek clarification of rule expanding APB control to all types of civilian aircraft.

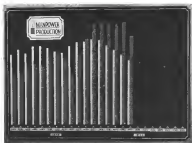
Clarification of the War Production Board's revision of Legislation Order L-48 governing production of civilian aircraft and components is being sought by the industry.

The order expands control of the Aircraft Production Board to include all types of civilian aircraft, instead of only planes of 500 hp or less, and adds engines, propellers, gliders, airframes and trusses formerly previously not covered.

Clarification—On the face of it, the order is meaningless unless it has for its purpose the setting up of machinery to provide for some civilian aircraft production over and above military production, but WPB spokesmen deny that that is the case now.

WPB maintains that the order is merely clarification of existing authority to permit better and more coherent processing of civilian requests for planes and parts, but admit that it constitutes machinery for relaxing munition standards as war orders begin to slacken.

Heretofore, the WPB spokesmen said, it has been necessary to readjust military standards to meet essential civilian requests, a process



## FIVE-DAY WEEK BOOSTS PRODUCTION:

Charts of Aircraft Components, Inc., of Van Nuys, Calif., employing 450 workers, support the company's shift seven months ago to a five-day 50-hour week. Joseph A. Ricketts, head of civilian relations, attributes a sharp increase of production with decreasing manpower and a 50 percent drop in absenteeism to the five-day 50-hour week.

made unnecessary by this revision of the order. It also was said that a single group in APB would be able to process the requests, whereas heretofore it has been done on a "spot" basis.

Post-War Housing—The WPB spokesmen insisted that the revised regulations will not permit any immediate expansion of civilian aircraft production, but said "the new procedure will have the advantage of permitting manufacturers to schedule production for essential civilian purposes in an orderly fashion, and also will obviate the necessity to make adjustments in military production schedules because of unplanned dimensions of equipment for civilian use."

Other sources pointed out that the revised L-48 would simplify procedure for companies such as that of the Boeing Stratoliner now under way at the Boeing Seattle plant, and for gradual conversion of other war plants to civilian products.

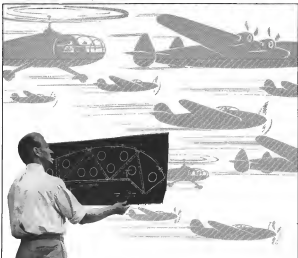
Prototypes—The revision does take cognizance of Order P-43, which similarly was reinterpreted in March to permit aircraft manufacturers to develop prototypes of new planes, provided manpower and facilities are not diverted from war work. That no "L" or "M" orders are violated, and also that no

publicity is given the prototypes. A successful prototype might be built under P-43 and permission for civilian production granted under L-48 so that tooling for the new model could be completed before the actual end of the war has arrived.



## NEW SAFETY CANOPY:

This tubular steel safety canopy, first of its design to appear on West Coast aircraft plant lift trucks, is the development of Douglas Aircraft Co. engineers. It is in operation at the company's Long Beach plant.



## New Kellett Reproduction Method Speeds Engineering—Cuts Costs

THE thousands of drawings, legends, templates, master block and jig patterns required for production of a single type of plane emphasize the importance of the time and cost saving benefits of the new Kellett Loft Reproduction System.

The method, which meets the wide range of requirements for photo-reproduction, requires only one hand-made layout, which is the original drawing board view. This is made on a master finish vinylite—a readily available, transparent, plastic sheet, which is impervious to moisture and possesses a very low co-efficient of thermal expansion.

Once checked, the vinylite drawing is used to make photographic copies on sensitized tracing cloth for blueprints, and on steel and other standard materials for templates, master blocks and jigs. Right or laterally-reversed images can be obtained with maximum accuracy.

The Kellett Loft Reproduction facilities are available to other manufacturers. For full details write Loft Reproduction Dept. F, Kellett Aircraft Corporation, State Road and Lansdowne Avenue, Upper Darby (Philadelphia), Pennsylvania.

# KELLETT

OLDEST ROTARY WING AIRCRAFT MANUFACTURING COMPANY

## FINANCIAL

### Stocks Reflect Changed Outlook For UAL, United Aircraft Shares

Market sees significance in action of airline company's common passing price of manufacturing unit's equities for first time since formation of separate companies in 1934.

The changing fortunes of the aircraft and airline industries were vividly highlighted recently when the price of the common stock of United Aircraft on the New York Stock Exchange.

This represents the first time since the dissolution of the old United Aircraft & Transport Corp. in 1934 and the formation of three separate entities now represented by United Aircraft Corp., United Air Lines, Inc., and Boeing Airplane Co., that the market price of United Air Lines has topped United Aircraft.

Up to this point, United Aircraft common consistently commanded higher prices than United Air Lines' common. There were times when the aircraft equity sold at a price of more than four times that of the air transport operator. This preposterous reversal reflects the public apathy accorded the aircraft industry as contrasted to the high favor shown the airlines.

**Both Leaders**—The two companies are both leaders in their respective fields. Similar reactions are noted by both almost identical common and preferred stocks are outstanding.

Market quotations in themselves are misleading. These prices must be related to basic earning power and underlying values. Despite almost similar quotations for the two common stocks, capitalizations are far from alike.

United Aircraft controls total resources of about \$238,000,000 while United Air Lines shows total assets of around \$22,900,000.

**Capitalization**—United Aircraft has a 5 percent preferred stock outstanding to the extent of 250,000 shares. United Air Lines has as recently issued 4 1/2 percent preferred issue of 165,000 shares. Both are quality preferreds, yet the aircraft senior equity sells around \$264 per share compared with \$116

per share for the airline preferred. In other words, the former yields about 4 1/2 percent on the current price while the latter, being in greater demand because of the conversion feature, returns but 3 1/2 percent on the investment. (Should United Air Lines common continue to appreciate, the preferred will sell at levels completely disregarding the dividend income.)

To United Air Lines' 1,500,451 common shares, United Aircraft reveals 1,656,701. The market price of these two common stocks is about the same, but not underlying values. Reduced to terms of net equity per common share, United Air Lines showed a net book value of \$19.97 per share or less than one-half of the current market quotation. On the other hand, United Aircraft's common stock equity per share amounted to \$37.16 or almost equal to recent market levels. The book values for both companies were as of Dec. 31, 1943.

**Earnings Record**—Based on past seasons, United Aircraft has the most impressive record. In the five

TABLE 1  
MARKET PRICES ON UNITED AIRCRAFT AND UNITED AIR LINES COMMON STOCKS

	1934	1935	1936	1937	1938	1939
United Aircraft						
Common	100	100	100	100	100	100
Preferred	100	100	100	100	100	100
United Air Lines						
Common	100	100	100	100	100	100
Preferred	100	100	100	100	100	100

TABLE 2  
EARNINGS AND DIVIDENDS TO SHARE ON UNITED AIRCRAFT AND UNITED AIR LINES COMMON STOCKS

	1934	1935	1936	1937	1938	1939
United Aircraft						
Earnings	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Dividend	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
United Air Lines						
Earnings	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Dividend	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00

years ended Dec. 31, 1943, the company showed aggregate earnings of \$26.83 per common share. Against this, United Air Lines common made but \$4.99. (Table II). As recent as the first quarter of 1944, United Aircraft's earnings are better: \$1.61 per share against United Air Lines' 66 cents.

Stockholders of United Aircraft have also fared well in the past, receiving a total of \$15.50 per common share during the past five years while United Air Lines paid but 50 cents per share in dividends during the same period. (Table III).

**Future Discount**—This comparative analysis clearly reveals that on the basis of underlying assets, past and current earnings and dividend payments, United Aircraft's common has a far superior record over United Air Lines' counterpart. Then why this disparity in market prices of the two equities?

It is the familiar story of looking ahead and discounting the future. The aircraft industry is believed to have slim pickings in the post-war era while the airlines are expected to grow and expand. Although market opinion appears to take a long view of the future, and in effect says that past and current aircraft earnings are very impressive but this price will be most difficult to maintain.

Similarly, the airlines have not yet demonstrated any real earning power but, in the new air age to come, air transportation will broaden on all fronts. The record of successful new industries is referred to as examples of scientific and rational progress. So reasons the current market consensus. To this may be countered the wild gyrations and delusions of equities of successful new companies in the past. For example, the common stock of Radio Corp. sold above \$100 per share without ever paying a dividend. Now, with established earnings a reality, the equity has established a market level of around \$59 per share.

**Subliminal**—An interesting aside-light to the market action of the two United aviation common stocks is the history of the companies themselves. When, under the provisions of the old Air Mail Act of 1934 the former United Aircraft & Transport Corp. was dissolved, fears were entertained that a possessing aviation enterprise would be killed and aviation progress stifled. Instead, three strong units emerged—any one



of which proved to be larger and stronger than its progenitor and each became a potent factor in the aviation field. Thus, as the same sequel as that which followed the dissolution of the oil and tobacco trusts.

## Minn. Wins 2 More Aviation, Tax Suits

Another series of legal actions revolving around the aviation and tax laws of the state of Minnesota has been decided in favor of the state.

In two decisions handed down by the Minnesota state supreme court, the constitutionality of the state's Metropolitan Airports Commission has been upheld.

**Favors State Control.**—The high court in its ruling said that "establishment of adequate terminals and facilities for the control of air traffic is beyond the capacity of private enterprise, and the necessity for a unified, integrated, centralized system of control of all classes of aerial traffic in the air ocean above the state, as a safety measure, calls for centralized control by the state government functioning in its sovereign capacity."

One challenge to the constitutionality of the law involved a Minnesota case in which it was contended the act was "special legislation" but resulted in the transfer of Wald-Chamberlain field from the Minneapolis Park Board to the Commission without "due process of law." The other action, which was filed in St. Paul, contended that it was invalid because expenditure of tax money was authorized therein for "private purposes."

## Financial Reports

**Edward G. Budd Manufacturing Co.** reports Q3 net income of \$2,661,127 and Budd Wheel Co. net income of \$1,613,278. Budd Manufacturing's total sales of \$116,625,845 were up slightly more than \$10,889,000 from the previous year and Budd Wheel's \$49,050,721 topped 1953 figures by \$5,553,125. Contract for 175 stainless steel Conquest cargo planes with Budd Manufacturing recently was contracted by the Navy, but a new contract for heavy expansion was given the company several weeks later.

**Aviation Corp.** reports consolidated net income for the six

months ended May 31 of \$3,217,853, equal to 40 cents a capital share, against \$1,912,164, or 23 cents a share last year. Earnings for both periods are before current reorganization. Net sales at \$33,602,816 for the recent six months compare with \$31,750,732 a year ago.

## J. & H. Employees Get Stock Rights

Offered privilege of subscribing to 150,000 Class A stock at \$100 a share.

Jack & Heintz, Inc., Bedford, O., manufacturers of aircraft components, are offering employees (association) the right to subscribe to 150,000 shares of Class A stock at \$100 per share, with the proviso that the shares be placed in a voting trust under which William S. Jack, Ralph M. Heintz and William R. Jack will exercise voting rights for 10 years.

**Working Capital.**—The prospectus covering the offering of the shares says proceeds from sale of the stock will be used for working capital, but may be used to provide changes or additions to fixed capital assets. The voting trustees retain full power to authorize mergers or consolidations with other companies, changes in the capital structure of the company, but must have a 75 percent agreement of shareholders to sell or lease all, or substantially all, assets of the company. Distribution is restricted to employees who are residents of Ohio.

The Class A shares are preferred equities to the extent of \$5 each, cumulative. They have no par value, the \$100 value being declared.

All common stock of the company is held by the William S. and William R. Jack and Heintz.

## Fibreboard Shortage

Shortage of fibreboard continues for air cargo and other shipping purposes will get worse before it improves, according to War Production Board prediction.

**War Demands Fibre.**—J. D. Macmillan, chief of the technical section of WPB's paperboard division, stated recently that demands by the Army, Navy, Land-Lesser and other wartime activities for packaged goods are responsible for the bottleneck.

## SHORTLINES

**►Zimmerly Air Transport Co.** has started a daily experimental air service between Los Angeles and Reno, Idaho. Alvin L. Zimmerly has filed tentative applications with Civil Aeronautics Board for routes in the West Coast states.

**►American Airlines** has announced the return to general ATC service of a Douglas C-54A, known as the Jodel, which was used during the winter for weather surveys on the North Atlantic route.

**►An air route between Canada, New Zealand and Australia**, to be operated by Trans-Canada Air Lines, is under consideration by the Canadian Government, C. D. Brown, Manitoba and Supply Minister, told the Canadian House of Commons recently.

**►New experimental air services** started recently in Mexico include three weekly round trips by LA-184 between Tijuana and Nuevo Laredo, and two round trips weekly between Monterrey and Tijuana by Aero Transportes, S. A., American Airlines' Mexican subsidiary.

**►Pan American Airways** is using two ten-man cargo unit teams at its North Beach, N. Y., terminal to perform all functions relating to weighing, checking, listing, classifying, securing, labeling, reweighing and stowing all types of cargo. The two teams which replace four departments, recently handled 30,000 pounds of air cargo in 24 hours.

**►Northwest Airlines passenger revenue** for June exceeded \$350,000, a new company record, President C. H. Hoover stated, naming the gain to an additional fight between Chicago and the Pacific Northwest. The airline handled 15,000 revenue passengers in June, exceeded only by the 35,348 record of August, 1951, a pre-war year.

**►United Air Lines announces** that 11 of its fleet of 30 planes await reconditioning, leaving 36 planes in operation. With this number, it is flying approximately 84,000 miles daily, compared with \$1,660 fewer before the war with 37 planes. Daily flight mileage has been increased to 1,180 between 1,100 before the war.

**►A four-engined Douglas R4D Skyraider transport**, first of its kind in the Navy, is to be used on trips between Alameda and North Africa under a contract for \$24,000 in all over the seas. Douglas and North the plane took off at Santa Monica recently for Panama, Md., to 50,000 pounds was of the heaviest form loads ever to leave the California field.



## New hydraulic hose simplifies front-line repair

Replacing damaged hydraulic hose in operations used to be a complicated, time consuming process involving work done on couplings around a gun, pressure and not away from the hose but on the hose. The only alternative was to keep thousands of different hydraulic assemblies on hand at all times.

To improve this difficult supply situation, manufacturers developed special couplings which could be made quickly and easily in the various sizes of hose then available. But they weren't successful, because the rubber in the hose would stretch and flow when secured between the parts of the coupling. Then genuine would pull the coupling loose.

To make these couplings successful, B. F. Goodrich engineers developed a hose with no layers of rubber inside or between the cord plies. Instead, pressing rubber was forced down into the fibers of the cord as it was bonded under the same rule. There was no free rubber to flow. The pins of the couplings just used had to be cut off, and had to be bent.

New Army Navy wanted for machine pressure created heat, that way, B. F. Goodrich hose is 50 to 70% lighter and from 30 to 50% stronger than the old type. It is the only hydraulic hose that is also constructed with such close dimensions that interchangeable couplings can be used. Front line hydraulic hose maintenance

is now simpler and quicker. For instead of having to stock thousands of different complete assemblies, a few sets of couplings and a few sets of hose are all a base needs. Assemblies are made up on the spot. The B. F. Goodrich Co., Automotive Division, Akron, O.

*Shipping on Highway*  
**B.F. Goodrich**  
**FIRST IN RUBBER**



# Aeronautical Training Society

Five years ago a group of civilian flying schools undertook the task of teaching Army Aviation Cadets to fly. International war clouds threatened this country. Our air force was inadequate. Time was too short for usual methods.

The Army called upon civilian schools to help. At first there were nine. As war became certain more schools joined until they were training not only American, but British, French, Dutch and Chinese pilots.

Since 1939, all pilots of the Army Air Forces have been taught to fly in civilian-operated primary schools under Army supervision. Aeronautical Training Society (ATS) is the liaison organization for these schools.

Southeastern Air Service, in two primary schools, has taught thousands of pilots. With graduates from other ATS schools, they are fighting on all air battlefronts.

Southeastern is proud indeed to be a member of the Aeronautical Training Society.



## TRANSPORT

### Examiners OK Northwest Extension Of Seattle-Milwaukee Line to N. Y.

PCA recommended for Pittsburgh-New York route but Chicago-New York request disappeared; consolidation of part of American's lines favored.

By DANIEL S. WENTZ II

Northwest Airlines' ambition to become the fourth transcontinental air carrier and Pennsylvania Central's plea for a New York connection were close to fulfillment last week after two Civil Aeronautics Board examiners recommended that the Board extend the line's Seattle-Milwaukee route to New York and grant PCA a Pittsburgh-New York link.

The report by Assistant Chief Examiner Francis W. Brown and Examiner William F. Cuck is the New York-Chicago Case (Docket 639 et al.) also proposed consolidation of a portion of American Airlines' routes.

**Five Requests Opposed**—Applications by Braniff, Colonial United, and TWA for Chicago-New York routes and a request by Chicago and Southern for a Chicago-Toledo certification failed to pass the examiners' scrutiny.

Although sweeping in scope, conclusions by Brown and Cuck

followed the trend of previous examiner reports and Board decisions in emphasizing the trunk line competition aspect of the application problem, leaving for later consideration the relation to local-feeder service of the routes involved. Some industry observers have felt that if there is to be a joint responsibility for trunk line and local-feeder operation, trunk lines should be performed accordingly.

The report reflected the emphasis placed by parties in the pleadings on a discretionary character of the proposed operations and the desirability of expansion by interpretation exemplified by the smaller carriers, many of whom want to get into the popular northeast quadrant of the country.

**Fourth Trans-U.S. Carrier**—Transcontinental lines now operating are American, TWA and United. In favoring a fourth

## Service Compared

In the presentation of their case in the New York-Chicago proceeding, Braniff Airways attorneys produced schedules to show that of 36 estimated airline stops of over 100,000 population, American serves 29 (81 percent), United serves 25 (69 percent), TWA and Eastern each serve 23 (64 percent), whereas Braniff serves 9 (25 percent of the total).

Of eleven metropolitan districts with populations over 1,000,000, American serves nine; United, six; TWA, eight; Eastern, five; and Braniff, one. Of the 29 highest passenger traffic generating centers, American serves 16, TWA, eleven, United, and Eastern, ten, and Braniff four.

transcontinental carrier to connect the important northeastern part of this country with the industrial east," the examiners proposed a route which, if granted by CAB, would give Northwest a course 213 miles less than United's shortest routing and 176 miles shorter than the connecting service possible over Trans-Canada Air Lines. The Northwest route would be 3,019 airway miles, compared with 2,832 for United and 2,790 via Trans-Canada.

The recommendation was a possible threat to United's present operation and its plans for an Alaskan extension. Should Alaska fulfill the expectations of these



### POLICY GROUP'S NEW EXECUTIVE COMMITTEE:

New executive committee of Airlines Committee for U. S. Air Policy plans to hold regular meetings but has not yet decided on a schedule. Ben Solomon, former chairman of the Policy Committee, now neither is nor the Executive Committee will have a chairman.

During the Committee's second year, which began July 15. Left to right: Jack Nichols, TWA; Ben Solomon, Northwest; Earl Erik Barstad, secretary to the committee; Tom Burke, American Export; G. M. Mosier, American; and Robert Thach, Northwest.

**SOUTHEASTERN**  
**AIR SERVICE, INC.**

Formerly GEORGIA AIR SERVICE, INC.

Flight Contractors to U. S. Army Air Forces — Beaufortville, S. C. and Jackson, Tenn.

Executive Offices — ATLANTA, GEORGIA



#### AIR EXPRESS OFFICIALS MEET:

More than 60 round-table discussions of mutual air express operating problems have been held in the past few months on a nation-wide basis. Midway Express Agency's Air Express Division reports this picture of one of them was taken at Baltimore and shows, counter-clockwise around the table, H. W. Rosberg, REA; Paul Burkhardt, United Air Lines; W. L. Morrison, Eastern Air Lines; T. O'Brien, REA; J. B. McLaughlin, REA; F. G. Blyth, REA, chairman; P. A. Vandenburgh, REA; Al Kury, American Airlines; Marshall Butler, PCA; W. N. Mang, REA; C. N. Kneble, PCA; and Don V. Seavers, All American Airlines.

who view it as a highly strategic link in post-war international transport operations, the route recommended for Northwest might well become a major artery of air travel linking the entire northwestern United States with an international gateway at Seattle.

**Intermediate Points.**—Detroit and Cleveland were recommended as intermediate points between Milwaukee and New York, with a restriction that flights east of Milwaukee must originate or terminate at Minneapolis and St. Paul or points west thereof on Northwest's system.

In October, 1943, surveys show that 36.9 per cent of passengers, 33.4 per cent of the mail, and 46.1 per cent of the express mailed by Northwest into Chicago were destined to points east of Chicago. American, United, PCA, and TWA will first diversion of a portion of this traffic should Northwest be certificated into New York, thereby carrying itself cargo and passengers now transferred to these lines at Chicago.

**Cooperation.**—Elimination of this competing service at Chicago will mitigate in part the congested traffic situation at the Chicago Municipal Airport, which in October, 1943, was averaging 233 landings and takeoffs per day.

Northwest estimates a net profit of \$113,314 on the basis of four early round trips between New York and Minneapolis-St. Paul, with a total capital outlay of \$388,963, which includes purchase of five DC-3's.

**Competition.**—"Establishment of the service proposed by Northwest," the examiners found, "will place that company in a position to compete on an equal basis with United for the transcontinental business originating or terminating in the Pacific Northwest and should, therefore, lend itself to the development and maintenance of a proper competitive balance in this area."

To afford American Airlines opportunity to improve its service from Boston to the West in order to meet on an equal footing competition over that route recently established by awards to United and TWA in the New York-Boston case, the examiners recommended consolidation of American's AM 7, AM 21, and the Albany-New York segment of AM 23.

**Skip-Stop Flights.**—American asked the commission to simplify clerical work and improve operations by permitting additional skip-stop and non-stop flights between cities on its system. Other examiners objected that the non-

stop operations possible under the proposed arrangement would subject them to considerable new point-to-point competition.

The examiners, therefore, recommended granting American a certificate drafted in such a way as to prohibit non-stop operations between points east of Buffalo and Cleveland and Erie. "The only important non-stop service possible" under the suggested certificate would be between Cleveland and New York.

**PCA Application.**—PCA's application for Chicago-New York route failed to meet the examiners' approval in 1941, but they do recommend giving that carrier entry to New York via an important extension from Pittsburgh. In addition, the examiners approve PCA's application for non-stop privileges between Detroit and Chicago, to place it on a more equal competitive footing with American.

Entry into New York will strengthen considerably PCA's AM 33 by giving the carrier access to one of the heaviest traffic generating centers in the country, and will strengthen the likelihood of a future PCA application to extend its routes from its present northernmost terminus at Birmingham to New Orleans.

## NATS Competition

The airlines do not need to fear competition from the Navy Air Transport Service after the war, Assistant Secretary of the Navy for Air A. L. Glines told the War Contracts Subcommittee of the Senate Military Affairs Committee during the aircraft hearings. The Army so far has not gone on record as to its Air Transport Service.

Glines told the Murray group that NATS would reduce its operations to a point where it would not be competing as soon after the completion of hostilities as the commercial airlines can take over the load.

The air secretary told the committee the Navy would always have to maintain a fleet of ships and transport planes to carry unusual loads, reach out-of-the-way bases and make emergency transfers of personnel and cargo for military purposes, but that there will be no occasion to duplicate service which facilities are adequate.



ARMY HANGAR section of beams of curved design prefabricated by Timber Structures, Inc.—Use of curved type permit of flat bottom chords providing bearing hanger supports 17' net (curved) without height when erected. Trusses were shaped to joints in few sections, assembled and erected in single loads.

## ERECTION IS IMPORTANT

### ...BUILD WITH TIMBER STRUCTURES

The final test of Timber Structures service to contractors, engineers and architects is the efficiency with which buildings can be erected. All along the line, from first blueprints, through plant prefabrication, inspection, assembly and shipment to jobsite, every step must be coordinated so that erection requires a minimum of time, machinery and manpower. How well this is achieved is illustrated by these typical examples:

1. For an aircraft hangar, an 8' by 600' been mounted on Campbell trusses was the early erection equipment needed for putting seven 16' glid laminated steel trusses in place.

2. When steel column deliveries were delayed for an airplane plant a special building and suitable clamping equipment was set up on the job and glid laminated columns speedily made up.
3. For three mid-continent army hangars 28'-160' concrete trusses (10 carloads) were assembled and erected complete 21 days from the time first car arrived at jobsite.

Key erection men are available from Timber Structures if desired. They

*Engineering in Wood*

are thoroughly familiar with erection procedures for all types of buildings.

Erection is but one feature of our "Engineering in Wood" policy. Other are research, design, engineering, prefabrication, inspection, transportation. All are responsible for the construction speed, economy, strength and permanence of roof trusses and other items furnished by us.

We invite inquiries as to work performed and as to our ability to serve you in timber and allied structural materials. Write for literature.

**TIMBER**  
STRUCTURES  
INCORPORATED

Portland 6, Ore. New York 13, N. Y.



41



## Retaining Competition

SCATTERED SPECULATIONS recently that the government is interested in competing in the aircraft manufacturing business, using DPC or other Federal-owned facilities, is dissipated by statements of two top officials of the Army and Navy. Both Assistant Secretary Gates and Under Secretary Patterson made it clear at the Senate Military Affairs Subcommittee hearing recently that the services are making their separate studies for maintenance of a post-war air force on the premise of a competitive industry.

The emphatic words of Mr. Gates are worthy of further dissemination than they have been given to date. "It is my belief," he said, "that the government should not try to operate, in competition with the aircraft manufacturers, the plants it now owns. These plants which are regarded as essential standbys for future reserve production should be 'put on ice' and the others should be sold to private industry. The soundness of the policy of leaving aircraft production in private hands has been proved by the record of the industry in this war."

Mr. Gates' words are especially significant, since it is the Navy which operates the only existing government-owned aircraft plant, the Naval aircraft factory at Philadelphia.

Mr. Patterson, in his statement, took pains to say that only through the industry's preservation in sound health can we be sure of maintaining world leadership in the air. "At all times expenditures must be sufficient to assure the competitive development by the aircraft industry of advanced airplanes, engines and other components."

These words should put at rest rumors which have been receiving undue currency in recent weeks.

## International Clarity

ONE OF THE COUNTRY'S foremost authorities on air law has gone on record with the commendable recommendation that the United Nations, when they assemble to frame a new international air convention, draft the term "sovereignty" that would indicate clearly what the parties may have in mind, "stripped of ambiguities and uncertainties."

As the State Department's adviser on air law, Stephen Latchford, points out in the current Department "Bulletin," such has not been the situation in previous air conventions. The terminology of international agreements has been a legalistic abstruseness whose complexity, it now appears from Mr. Latchford's analysis, has created about as much confusion and doubt among legal experts themselves as it did among writers who sought to summarize the issues for the public.

Mr. Latchford stresses also that among other things the "right of innocent passage" is a meaningless term as far as commercial operations are

concerned, and suggests it be abolished. As most aviation-minded citizens should know, but few seem to remember, innocent passage is a term that in all air agreements to date has applied principally to private aircraft.

The article reviews provisions of the Paris Convention of 1919, American bilateral agreements with Italy and Canada, and the Havana Convention of 1920. It points out that although innocent passage was guaranteed in these agreements, provisions were included that flight into or through any country should be subject to prior approval of that country in each instance.

Latchford makes these specific recommendations:

- 1 Abolish "liberty of passage" and "right of innocent passage" as terms in air agreements. In their stead, there should be clear language indicating whether it is intended that private aircraft may fly into or through a foreign country without prior authorization from its government.

- 2 Use appropriate terminology to make absolutely clear whether "definite right of transit" is to be accorded for scheduled air transport operations. "If this right is to be accorded it should be made clear also that this right of transit would be distinct from and in addition to any commercial rights of entry that may be agreed upon at the same time."

He defines right of transit as the right to make non-stop flights across any country with right to land for technical purposes but not to discharge or pick up cargo. The latter would come under the definition of commercial entry.

Latchford says he is not speaking for the government "necessarily," but the tenor of his article suggests strongly that the U. S. will demand clear, unambiguous language in the forthcoming air agreements.

## "Terrific" Ground Crews

THOSE GI GROUND CREWS of our Army Air Forces are terrific. Assistant Secretary of War Lovett in a press conference last week said only that word can describe them.

In any war it's the flying crews who win most public recognition for their work and sacrifices. Not until military statistics now secret can be released will the basis for Mr. Lovett's enthusiasm be fully appreciated by aviation maintenance and operations men and the public.

It can only be said, however, that four days after D Day, when we put everything into the air that we had, the number of our heavy bombers inoperative from operations difficulties had dropped only a small percent despite over 2,000 sorties in one day alone. The number of fighters in operation in some squadrons decreased only slightly and in other squadrons the numbers did not decrease at all. As remarkable as these facts are, even they do not tell the full story of the amazing job the ground crews have done and continue to do.

ROBERT H. WOOD

40 pages of new,  
up-to-the-minute

*facts*

FOR USERS OF  
INDUSTRIAL  
PLASTICS



Here's new and up-to-the-minute data for designers, in concise, easy-to-use form. Users of industrial plastics . . . manufacturers looking for ways to utilize the advantages of Micarta to replace other materials . . . will find full and helpful information in this revised and enlarged Micarta Data Book.

Forty pages of property tables, performance curves and design suggestions provide working data for selecting the proper grade of Micarta for heavy-duty service in any field. Data covers both laminated, molded, and formed Micarta. Grades include those designed for ammunition chutes, bomb racks, instrument panels, pulleys, antenna masts, fan-blades, structural angles and channels . . .

Reserve your copy of the new Micarta Data Book today. Write Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., Dept. 7-32.

Westinghouse  
**Micarta**  
THE INDUSTRIAL PLASTIC

## GET THIS HELPFUL DATA:

**Grades of Micarta**—their characteristics . . . corresponding Army and Navy types.

**Properties of Micarta**—mechanical . . . electrical . . . chemical . . . how they compare with other materials.

**Designing Help**—machining data . . . how to apply directional loads . . . molded and formed Micarta design suggestions.

**Forms Available**—standard shapes and sizes . . . plates, rods, tubes, angles, channels, etc.



PLATES IN STOCK . . .

OFFICE EVERYWHERE



The B-29

*Official U.S. Army Air Forces*

## FIRE POWER *by General Electric*

**M**ORE fire power—more accurate fire power—more electric power than in any previously built plane . . . that's part of the B-29 story. Its unique gun-fire control system and multiple gun turrets and sighting stations—developed and manufactured in G-E plants throughout the country—give the Superfortress an unparalleled striking power. The computer of this system automatically calculates the speed of enemy craft, wind drift, and other factors; the gunfire can be concentrated in the right spot—at the right time!

This fire-control system, and the system for pressurizing the cabin from the turbosuperchargers (two on each engine), as well as precision-gear motors and other electric devices, were developed by G.E. for the B-29 during the past three years. That they are now proving their worth in actual combat is a source of pride to all the G-E men and women who worked on them. Our laboratories and extensive manufacturing facilities are at the service of the aviation industry. *General Electric Company, Schenectady 5, N. Y.*



**PRECISION PRODUCTS  
AND  
ENGINEERED SYSTEMS  
FOR AIRCRAFT**

Buy all the BONDS you can  
—and keep all you buy

**GENERAL  ELECTRIC**

U.S. 28-1072